

MARINE RECORD

ESTABLISHED 1878.

VOL. XXV, No. 30.

CLEVELAND -- JULY 24, 1902 -- CHICAGO.

\$2.00 Per Year. Single Copy 10c

LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and to improve the character of the service rendered to the public.

PRESIDENT.

WM. LIVINGSTONE, Detroit.

1ST VICE-PRESIDENT.

J. C. GILCHRIST, Cleveland.

SECRETARY.

HARVEY L. BROWN, Buffalo.

TREASURER.

GEORGE P. MCKAY, Cleveland.

COUNSEL.

HARVEY D. GOULDER, Cleveland.

EXECUTIVE AND FINANCE COMMITTEE.

JAMES CORRIGAN, Chairman, Cleveland.

COMMITTEE ON LEGISLATION.

GIBSON L. DOUGLAS, Chairman, Buffalo.

COMMITTEE ON AIDS TO NAVIGATION.

GEORGE P. MCKAY, Chairman, Cleveland.

LOCATION OF WRECK.

The wreck of the steamer George Dunbar, which sank on the morning of June 29, has been located by U. S. Assistant Engineer William T. Blunt, by direction of Major Dan C. Kingsman, Corps of Engineers, U. S. A. The location given by the owners was so far from correct that a search in that vicinity failed to discover the vessel. The first reliable information which reached the authorities came from Capt. S. O. Robinson, of the C. & T. steamer State of New York, and the description given by him was found to be closely correct.

The vessel lies on an even keel, heading E.S.E., in 44 feet of water, E. $\frac{1}{2}$ S. $\frac{5}{8}$ miles from Middle Island light-house, and east from the Middle Island passage. It is almost exactly on the range of Nun buoy on the northeast corner of Kelley Island reef, and the extreme northeast point of Kelley Island. It is N. $\frac{1}{4}$ W. from Huron light-house, and N.E. by N. $\frac{3}{4}$ N. from red gas buoy at entrance to Sandusky harbor, directly on the course to South-East shoal light-ship. It is but two miles northerly from the sailing course between Cleveland and Middle Island passage. It is, therefore, a menace in thick weather to vessels passing between Sandusky and South-East shoal light-ship, or between Cleveland and Middle Island passage.

It may be platted on the chart 4,300 feet north of parallel $41^{\circ} 40'$, 4,600 feet east of meridian $82^{\circ} 35'$.

On July 18 the foremast was still standing, with an association flag attached, and the wreckage of the pilot house was floating, attached to the wreck.

A floated buoy, carrying a large red flag, was placed about 300 feet south of the wreck for the purpose of location, should the spar be carried away.

The location of the vessel is so close to the international boundary that it is not certain whether it is in United States or Canadian waters.

THE "SOO" CANAL.

The semi-Centennial of the Sault Ste. Marie Canal, Mich., dating from the breaking of ground for construction, will occur on June 4, 1903. A movement is now on foot to celebrate this occasion, and a memorial which had been sent to Congress to this end asking for \$50,000, states that at that canal can be witnessed the greatest concentration of commercial tonnage traffic on the globe. During 1901 over 28,000,000 tons of paying freight, valued at nearly \$300,000,000, passed through this 200-foot wide channel. This is a greater volume of freight than passed between Europe and America in the same time; and the Suez canal tonnage for 1901 was less than one-third of that of the Sault canal. Fifty years ago a dozen horses, operating a flat-rail tramway and plank road, moved all the freight then passing to or from Lake Superior.

NEW STEAMSHIP LINE TO VLADIVOSTOCK.

The Kotzu Maru, of 1,300 gross tons and 922 register tons, which arrived recently, is the first ship of the new, or Tsuruga line, which receives a subsidy of \$70,000 from the Japanese Government.

A Japanese paper (the Tokyo Asahi) reports that the Chinese Eastern Company (a Russian organization) has made a contract with the Japanese Government for the opening of this line, to last ten years. Japan is to pay a subsidy, and the Chinese Eastern Company is to allow a certain number of Japanese to serve on its ships.

Tsuruga is a new port on the west coast of Japan, opened to foreigners two and a half years ago. The port has been greatly improved for steamer accommodation. The time from Vladivostock to Tsuruga is one and a half days, and to Osaka, the great manufacturing city, less than twenty-four hours.

In connection with this line, the Chinese Eastern fleet will have direct communication with the United States. Whether Japanese ships or Russian are to sail to the United States is not quite clear. So far as the Chinese Eastern steamers are concerned, it is said they cannot carry coal enough to cross the Pacific. One of them (the Byrea), launched in 1901, has just been examined and her boilers found useless.

While Russia is making strong efforts to extend her commerce in the East, every ship on the Chinese Eastern lines runs at a loss. Steamers come in with perhaps from 16 to 300 tons of freight, and from ten to twenty passengers, but they must run them according to schedule to obtain the subsidy. Under present tariff conditions, it is not likely that freight will come to Vladivostock in large quantities.

LAKE AND RAIL ROUTE.

A new route from lower Michigan points to Duluth, saving eighty-five miles in the length of the present shortest route, is what is claimed by Dan W. Kaufman, of Marquette, for his new across-lake line via Northport and Manistique.

Mr. Kaufman has given an order to the American Ship Building Co. for the first of two immense car ferries, which will be ready for service at the beginning of navigation next April.

The new ferry will be started on the route between Northport in the lower peninsula of Michigan, and Manistique, in the upper peninsula. It will form a connecting link between ports that are open all the year around, for two sections of a system of railroad that are quite important though small. The Manistique, Marquette & Northern extends from Manistique almost due north, having a connection with the "Soo" line at Manistique, and with the Duluth, South Shore & Atlantic at Shingleton. This will give the road important feeders for its lines in the lower peninsula. A line is now projected between Traverse City and Northport, through Leelanau county, that is under construction, and is to be known as the Traverse City, Leelanau & Martinique, which will have its lake port at Northport. At Traverse City the line connects directly with the Grand Rapids & Indiana railroad, a Pennsylvania property.

AN ERIE CANAL CONFERENCE.

Within a short time another conference will be held of the canal men of the State of New York. Albany has been agreed upon as the place of meeting and representative men from all over the state will be present to renew again the fight for the improvement of the state's waterways.

Buffalo will be represented at the conference by the following-named men: George Clinton, John J. McWilliams, Maj. Thomas W. Symons, R. R. Hefford, Alfred Haines, John Laughlin, John Cunneen, M. M. Drake, W. A. Rogers, George P. Sawyer, T. S. Fassett, and George H. Raymond.

It is understood that the fight will be made squarely this winter on the 1,000-ton barge proposition. Gov. Odell's plan was for a nine-foot canal allowing of the draught of 450-ton boats. This was accepted on the theory that half a loaf was better than no bread. Now, however, it is said the canal leaders think it is time to make the fight squarely on the 1,000-ton barge issue.

THE WORLD'S NAVIES.

According to the Naval Annual of 1902, the fleets of the world are divided as follows: Of first class battleships, built and building, Great Britain has forty-one, the United States, seventeen, Germany sixteen, Russia, fifteen, France thirteen, Italy nine, and Japan six. In the second class of battleships, Great Britain has eleven, France and Russia ten each, and Italy five. In the third class of battleships, Great Britain has seventeen, France and Germany fifteen each, the United States eleven, Russia eight, and Italy and Japan two each. Adding these figures together, it gives a total of sixty-nine battleships for Great Britain, thirty-eight for France, thirty-three for Russia, thirty-one for Germany, twenty-eight for the United States, sixteen for Italy and eight for Japan. But it will be seen that, while Germany has three more battleships than the United States, this preponderance comes entirely in the third class, for we have one more first class ship than has Germany; in fact, we have more than any other power except Great Britain.

WAVE RESISTANCE.

What resists the passage of a ship rapidly through the water? says the London Telegraph. Most people would reply "the necessity of pushing aside an amount of water equal to the size of the hull below the surface." Dr. Fleming, who has studied the matter says not; that the resistance is chiefly due to the "stickiness" of the water and the waves the ship pushes up in front. Of course such liquids as tar or molasses present a greater degree of this, but water also has what is called the skin friction of ships. On torpedo boats at 10 miles an hour 80 per cent. of the entire resistance arises from this water friction; but at full speed this is only 43 per cent., the other 57 per cent. resulting from the huge waves thrown up in front. The shape and covering of fishes is such as to excite the least resistance. A photograph of the Viper at 43 miles an hour showed the bow actually lifted out of the water while the boat herself seemed to be resting on her bow wave. It is the steam power required to drive these huge waves that caused the Deutschland to burn 2,500 tons of coal in her five and one-half days' trip across the Atlantic.

ENGINEER'S REPORT OF CHICAGO RIVER.

Lieut. Col. O. H. Ernst, Corps of Engineers, U. S. A., has made his annual report of the improvements of the rivers and harbors of the Chicago district. He makes the following estimates for the fiscal year, 1904: Chicago harbor, \$210,000; to complete the project, \$457,965. Calumet harbor, \$204,480, which will complete the project. Calumet river, \$260,000; to complete the project, \$423,822. No estimate is made for the Chicago river, there being now available, \$507,954.

Col. Ernst, in discussing the effects of making the Chicago river a sewer for the city of Chicago, says that the slope of the river has been changed and this has reduced the depth, but the sanitary district has agreed to remedy this defect by dredging. Periodical dredging will be necessary to maintain the river as a navigable channel and a sewer. As it is a sewer of the city, the colonel thinks the city and not the general government should do the dredging and maintain the channel. On the south branch the question has been solved by the necessities of the drainage canal. "But," continues the report, "the sanitary district has not accepted the responsibility for maintaining the other branches. Whether that organization or some other representing the people of Chicago should do the work is for them to decide, but it seems to me clear that the United States should not be called upon to do it. Accordingly no estimate for maintaining the channel excavated under the project of 1896 is submitted." It is proposed to use the balance for the acquisition of the necessary land and to excavate two turning basins, one on the south branch near its junction with the south and west forks, and the other on the north branch near the head of Goose Island.

Colonel Ernst says that while the volume of business on the river was slightly larger this year than during the previous year, with that exception it was less than for any year since 1893.



CHICAGO.

The steamer Tuscarora, of the Lehigh Valley line, which has been in drydock since June 22d, is now on her route again. Fifty of the Tuscarora's plates had to be taken off and rerolled and 180 frames straightened.

Meteorological data for the week ending July 23: Prevailing wind direction for the week, southwest; highest velocity, 69 miles from the southwest on the 17th; mean temperature for the week, 69 degrees; highest temperature, 89 degrees on the 17th; lowest temperature, 57 degrees on the 20th.

The Australia, which was recently converted from a tow barge to a screw steamer, by the Ship Owners' Drydock Co., at North Halsted street bridge, is reported to have made over twelve miles an hour on a run from Escanaba to South Chicago, and has done very well in towing the Polynesia, of the Corrigan fleet.

A fusillade of bullets, evidently fired by a military company on shore struck the schooner J. M. Harvey, while she was sailing up Lake Michigan, cutting through the sails burying themselves in her hull and driving Capt. John Harvey and his crew hurriedly below decks. Capt. Harvey has reported the facts and made protest to the customs officers at South Chicago.

It is reported that a new lake transportation company is being formed at South Haven, to go after a slice of the business now controlled by the Dunkley-Williams Co. The new company will be capitalized at \$500,000. Chicago and South Haven capitalists are backing it. The principal stockholders are: Barrett & Barrett, Chicago; John F. Noud, and Capt. J. C. Perue, of South Haven.

In securing the contract for building a new fireboat for Milwaukee last week, the Ship Owners' Drydock Co. gained the opportunity for building the first steel vessel ever constructed on Chicago river. The new craft will be 120 feet long and 26 feet beam. She will be equipped with fourteen pumps, with a capacity of 10,000 gallons a minute. The hull construction and equipment will cost about \$100,000.

The steamer George G. Hadley, in dry-dock at Milwaukee since July 7 for the repair of damage sustained in her collision with the whaleback steamer Thomas Wilson and subsequent sinking in shoal water off the Duluth ship canal entrance, will be ready for business early next month. It was found necessary to entirely rebuild her starboard bow to a point 50 feet abaft the stem. Her port bow requires only partial rebuilding. In addition she is receiving a new deckhouse and the entire interior work of the after cabin is being rebuilt.

Capt. David Morris is lying ill at his home in South Haven, from a complication of troubles from which his physicians say there is no hope of recovery. Capt. Morris has sailed for nearly fifty years, and was with the Williams South Haven line from its inception until this spring, when he resigned rather than take a thirty-day suspension of licenses for running into the pier at South Haven with the steamer Kalamazoo, in a dense fog. He had commanded the Kalamazoo since she came out in 1893. This is another local inspector's license deal of questionable equity in judgment.

The strike of upwards of 8,000 freight handlers at the terminals of the railroads entering Chicago was settled on Wednesday, the 16th inst., after the men had been out ten days. The strikers practically accepted the terms offered by the railroad companies on July 1. One of the most important factors in forcing settlements was the decision of the teamsters to live up to the contract of their union and return to work. During the early part of the week 12,000 teamsters had gone on strike out of sympathy with the freight handlers. It is estimated that the loss to the men in wages has been \$200,000, and the loss to railroads about \$1,500,000.

Trouble is expected in the forthcoming adjustment of a wage scale between the Lumber Carriers' Association and the Lumber Handlers' Union. Edward Hines, chairman of the association's loading and unloading committee, has asked the longshoremen's convention to set a date for a conference. The association prefers that it be held in January or February next. The request has been referred to the lumber handlers. Richard Summers, delegate of a Chicago union at the convention, has presented a resolution asking for an increase of ten cents an hour, or five cents a thousand, for extra work unloading boats, the same to apply over the Great Lakes.

Much important business was hurried through by the executive board of the Longshoremen's Association,

which was adjourned permanently. The ore handlers are to be represented at a wage scale conference, to be held in Cleveland, the first Monday in March next year. Conferences on the wage scale will be held between the lumber loaders of Lake Superior and the Lumber Carriers' Association early in February, and on Lake Michigan late in the same month. The first conference will be held at West Superior, and the second at some port not yet decided upon.

Installations of wireless telegraph service on the Great Lakes is being planned, and owners of boats running out of Chicago are being canvassed, as are managers of freight and passenger vessels at other ports. The plan proposed is to establish shore stations at the larger ports, and to equip with receiving and transmitting apparatus, the steamboats plying out of those ports. Chicago, Buffalo, Detroit, Mackinac, the "Soo," Milwaukee and Cleveland have been selected for the initial installation, and thereafter Duluth and other ports will be included. The plan contemplates the leasing of the instruments in use on the vessels, and with many owners the use is said to be a rent low enough to warrant the expense.

A statement made by Col. Ernst, Corps of Engineers, U. S. A., who is in charge of the rivers and harbors work at Chicago, indicates that the sum of \$1,556,327 is needed for the improvements in that port during the coming year. He estimates that about \$500,000 will be needed for the improvement of the outer harbor, of which the contractors will be able to earn about a half during the ensuing year. The sum, he says, required to complete the work will be about a duplicate of the sum that has been expended since the improvement of that harbor began in 1870. Colonel Ernst says that the Calumet river will require a little over \$200,000 to complete the work already in progress there. One of the things that is being contended for in the Chicago river is a turning basin for the boats.

The Great Lakes Towing Co., which for three months has not been able to operate a tug at Chicago or Ashtabula on account of its strike, will probably resume service at both ports within a short time. One of the directors of the company said this week: "We have tried to avoid all newspaper reference to the progress we are making for the reason that it would have a tendency to stir up the union officials. The board is better satisfied now than at any time since the strike began. We have five tugs working at Buffalo, six in Cleveland, and six in Duluth, with all other ports working full forces except Chicago and Ashtabula, where we hope to give satisfactory service within a week or so. The fact appears to be that newspaper reference has been courted at all times, and every day since the tugmen went on strike stuff has been printed.

In a trial of speed between the Goodrich liner Virginia and the Northern Line passenger steamer North Land, on Friday last, the Virginia showed the best speed. The race covered the distance between Milwaukee and Chicago, eighty-five miles. The North Land passed out of Milwaukee harbor twelve minutes ahead of the Virginia. Five hours later, when the two steamers were abreast of the piers at the outer Chicago breakwater, the Virginia was three minutes behind and had been unable to pass the North Land. Chief Engineer Philip, of the North Land, attributes his steamer's inability to make racing speed to the fact that she is equipped with natural draught only, and thus is unable to get up the required amount of steam necessary for a burst of speed. He would not admit that the North Land was beaten. Engineer Roth, of the Virginia, said: "I think it has been demonstrated that alleged twenty two mile boats are not to be had on Lake Michigan as yet. If there are any twenty-two mile boats running on Lake Michigan now, we can beat them with a boat which we have never claimed could go faster than seventeen miles in regular running."

The Chicago river performed a freak trick on Wednesday last, which puzzled the oldest frequenters of the stream, and a solution for the cause of a sudden fall and subsequent rise in the stage of water equally perplexed those who have made a study of the currents since the drainage canal was opened. At 9 o'clock in the morning the stream began to flow into the lake, and the current continued to gain force until it reached a measured speed of a mile and one-quarter an hour. The flow lakeward kept up until about 10:30 o'clock, during which time the river's level had dropped three feet. From that time on the water began to rise and the current reversed, bringing the stream up to its normal level late in the afternoon. The drainage canal locks at Lockport were not closed during the drop in the river, and about the only reason given for the unusual happening was that the heavy west wind prevailing drove the water out into the lake, and it was in turn forced back again when it met the outer currents. Harbormaster McCarthy, who has for many years been as close an observer of the river's freaks as any other one person, could not explain, but quickly ordered that all boats be held from crossing the tunnels until the water had backed up.

The Lake Carriers' Association committee on water levels, Capt. J. W. Westcott, chairman, has decided to show the depth of water over the Limekiln Crossing up to and including 18 feet 6 inches.

BUFFALO.

Capt. Dunlap, connected with the Tenth Light-house District for two years, has resigned his position.

The steamer City of Venice will be in dry-dock three days for repairs to her forefoot. The Centurian is in dry-dock for general repairs and a new rudder.

Two shipments of small cargoes of anthracite cleared last week and there is about as much more in sight, but no more. Soft coal is being received in quantities to equal the demand.

Messrs. Daly & Hannan, of Ogdensburg, have been awarded the contracts for dredging the entrance of the harbors at Charlotte and Olcott, by Major Thomas W. Symonds, United States Engineer.

The question is now asked if there would be a boycott of the passenger line boats if they were to be towed with non-union tugs? Quite a large number of summer travelers are unionists one way or the other.

The steamer Portage, of the Union Transit Line, arrived here this week badly damaged forward by her recent collision with an unknown lumber barge. It is believed repairs will consume about ten days.

Work is rather quiet at the Buffalo dry-dock, there is a small amount of repair work, and only a few men are employed at present. Steel for the two new ships to be built at this yard will not arrive until some time in August, and until it reaches the yards there will be but few extra workmen required.

The indications are that the Firemen and Oilers' Association is to take a hand in the tug strike. The masters of the steamers Wilkesbarre and Gault were notified that they would have a strike on their boats if they gave their lines to tugs of the Great Lakes Line. In both cases the demands of the firemen and oilers were acceded to and independent line tugs did the work.

Although it was thought July would be a light month in the lumber trade, up to date 52,000,000 feet have been received. The receipts of lumber, especially hardwood by rail has been unusually large during the past weeks. The first lumber cut this season is well enough seasoned to be shipped to buyers and no doubt will cause rapid work in the shipment of lumber to Tonawanda and other lumber ports.

In order to save the lives of unfortunates who, while boating above the falls are caught in the current that runs to the cataract, it is proposed, says a Niagara Falls dispatch, to string a line of buoys, extending from the American mainland above Goat Island to a point on the Canadian shore near Chippewa. These may be connected by a wire rope and bear electric lights. A life saving crew is about to be organized and a station built above the upper rapids.

The light-house tender Haze was floated out of dock at the Buffalo Dry-dock Co.'s yards on Monday, where she has been having a new shoe and rudder supplied. She will depart this week on a supply and inspection trip up the lake, and it is expected that when she returns she will have on board Rear Admiral H. C. Taylor, who has been detailed to inspect the various sites suggested for the new naval training station. These are at Put-in-Bay, Erie, and Buffalo.

The Collingwood Ship Building Co. has launched from its yards a steel tow barge, the Agawa, built to the order of the Algoma Central Steamship Co. This vessel is 390 feet in length and by far the largest ever built in Canada.

It is now expected that daily service between Detroit and Buffalo will be resumed on July 25th, as it is believed repairs to the Eastern States will have been completed by that time. Until that date the Western States will continue to depart from Buffalo on alternate days.

This week is not likely to witness the coalition of Buffalo's rival grain elevating associations. Secretary Cook, of the Western Elevating Association said this morning that no further steps had been taken in the way of looking toward a reconciliation of his association with the Elevator Owners' Association. "No meeting of our association has been called," said he, "and I don't know when one will be held. No change has been made in our rate for elevating grain. We are still charging a half cent a bushel." Secretary Smith, of the Elevator Owners' Association said there was nothing new in the situation.

Charges filed against Immigration Inspector De Barry, of Buffalo, brought about orders dismissing that official from the service at once. He will be succeeded by Thos. O'Reilly, for some years a clerk in the office of the Commissioner of Immigration in this city, who has been in Buffalo for the last two or three years. Speaking of the case, the new Commissioner of Immigration, Mr. Sargent, said: "When I came into office a few weeks ago, I found all the papers and evidence in the case on my desk. I examined them with great care, and became fully satisfied, even from Mr. De Barry's own explanation, that he was not conducting the affairs of his office in that discreet manner that should always characterize every public official, and was not, therefore, the man we wanted in the position. I accordingly recommended that he be removed from office. Secretary Shaw has now ordered the dismissal to take place as soon as the order can reach Mr. De Barry in the usual manner."

DETROIT.

It is reported here that the McMillin-Hendrie interests have bought 1,200 more shares of stock in the Detroit & Cleveland Navigation Co. at a price exceeding \$100,000.

The damaged cylinder head on the Detroit-Buffalo passenger steamer has been repaired and the boat will be again ready to go on her route next week. A new cylinder head is being cast and will be placed after the season has closed if not required sooner.

Capt Lansing H. Beach, Corps of Engineers, U. S. A., in charge of river and harbor improvements, at Detroit, in his report to the chief of engineers, makes the following estimates for the year 1904. Saginaw river, Mich., \$50,000; Harbor of Refuge at Sand Beach, Lake Huron, \$60,000.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, Detroit, for the week ending July 22, 1902. Prevailing wind direction for the week, W.; highest velocity, 32 miles from the west on the 17th; mean temperature for the week, 70°; highest temperature, 89° on the 17th; lowest, 60° on the 22d.

Secretary-Treasurer Barter, of the International Longshoremen Marine & Transport Workers, says that the tug firemen will be admitted to the association if they make proper application. In regard to the admission of striking tugmen to the association, Barter says they will be given aid, but in just what way will not be determined for at least a week.

A member of the Lumber Carriers' Association is now of the opinion that the tonnage withdrawn some weeks ago in order to compel the maintenance of the \$2.50 rate on Lake Superior lumber, may now be placed back on the market without endangering the rate. It is said that within the past week, nineteen boats have been chartered to carry lumber at \$2.50 per thousand feet.

The steel cargo steamer A. E. Stewart, 3,943 gross and 3,049 net tons, built at West Bay City, and hailing from Cleveland, O., has been granted an official number by the Bureau of Navigation, Treasury Department, Washington. This one vessel equals the combined tonnage of all others, a total of 34 vessels, registered for the week in the United States, and several of which were built in other years.

Collector of Customs John T. Rich desires to warn all owners of small boats, whether of power launches, sail or row boats, navigating the Detroit river and vicinity, that it is illegal for any boat, however small, to be in service after dark without lights, and that there is a penalty attached for each violation of the law—\$200. This law will be strictly enforced and a diligent effort made to locate and punish offenders, in an endeavor to secure the safety of the concerned.

It is reported from Toledo that it is now simply a case of handling the coal at the docks. All of the machines are running night and day, and loading boats at record making speed. It is not expected that the railroads can keep up their present pace. An immense tonnage of coal has been held for the past three weeks, in anticipation of a strike. In letting go of this, the railroads are furnishing the docks with all of the coal that they can handle. When trade is restored to its normal condition, coal will not come forward so rapidly.

General Superintendent Ripley, of the "Soo" canal, states that it will probably be three months yet before contracts are let for the new West Neebish channel work. While this will bring the season pretty nearly to a close there will be time for successful bidders to get plants on the ground and do some work before winter sets in. It is likely, too, that certain sections will have to be cofferdammed and this work can, and no doubt will, be prosecuted during the winter. Widening the canal above the locks will be commenced this fall. Estimated cost of the improvement is \$750,000, of which there is now available about \$500,000.

It is stated on good authority that the next Congress will be asked to provide additional locking facilities for the "Soo," and the chances are considered most favorable for the granting of the request. The need of locks, greater even than those which the government now maintains, is apparent. The number of vessels passing through in one day of twenty-four hours rarely falls short of the century mark, and not infrequently runs as high as 125 or more. With the vast shipments of ore, and the consequent demand for ships to carry it, the number of vessels now under construction, and the orders for still more, it may readily be seen that by the time Congress could make the appropriation and the locks built, they would be greatly needed.

The White Star line has, after considerable delay, recognized the request of the Toledo Lake Tugmen's Protective Association, and is now using the independent tugs manned by union crews instead of trust tugs, which have heretofore been employed. Some time ago the Lake Tugmen's Protective Association appointed a committee to wait upon the Star line officials and request them to use union tugs, and the matter was later referred to the Central Labor Union for indorsement, which was received. General Manager Parker, of the Star line, is connected with the Great Lakes Towing Co., and evidently preferred to give the business to his own line, but pressure was applied, he yielded to keep peace with the unions.

DULUTH-SUPERIOR.

All attempts to recover the cargo and bodies of nine men in the sunken whaleback Thomas Wilson have been abandoned. The Wilson was lost in Duluth harbor through a collision with the steamer George H. Hadley.

One of the largest timber deals in the history of St. Louis county has recently been consummated, and a deed for the property filed in the office of the register of deeds. The property is conveyed to the Adams Mining Co. by Jacob Gensman, of Marathon county, Wis., and John Oelhafen, of Lincoln county, Wis. The consideration named is \$225,000. The property contains about two million feet of timber, and is located in St. Louis and Lake counties.

Capt. B. B. Inman, of Duluth, has been appointed assistant marine superintendent of the Pittsburgh Steamship Co., with headquarters at Sault Ste. Marie. At the beginning of this season, having left the tug business, Capt. Inman took a position as a special master for the Pittsburgh Steamship Co., and travelled up and down the lakes getting acquainted with the business. At that time it was supposed that the position would ripen into another post. Capt. Inman will have charge of all of the boats as they pass the "Soo" and will conduct the company's business at that point.

Word has been received here from Marquette stating that it is officially announced that the Cleveland Cliffs Iron Co. has purchased the lease held by the Itasca Mining Co. on 160 acres of land adjoining the Hawkins mine on the Western Mesaba range. The consideration was \$500,000 cash and 7 cents per ton for all ore now shown up (about 5,000,000 tons), and all that yet to be found. The lease provides for the payment to the feeholders of a royalty of 20 cents per ton on all ore mined, which makes the total consideration considerably over \$3,000,000, it being estimated that the tract contains fully 10,000,000 tons of ore.

This will be a busy winter at the West Superior yards of the American Ship Building Co. In addition to all the new work that can possibly be carried on there will be repairs, overhauling, etc., on the largest and most important fleet that ever wintered at the head of the lakes. Superintendent Williams says: "Last winter we repaired 40 boats and had two boats on the stocks at a time and with this amount of work we were compelled to employ 1,100 men. With the amount of work that is now scheduled it is not easy to see how we can get along with less than from 200 to 300 men additional. Our material for the new buildings is arriving and we are now delayed only by the lack of fir for the foundation which will be put in by the Barnett-Record Co.

The license of Capt. B. C. Gray, one of the men imputed by the Union Towing & Wrecking Co., after the strike began, was suspended for a period of ten days, by the local steamboat inspectors. The decision came after an investigation of a collision between the tug Superior, of the towing company's fleet, and the Medina, which occurred June 11. Both tugs were coming toward Duluth from the slip, where elevator B is located. The Superior blew one whistle and the Medina responded. The decision says that the former should have directed its course to the right, but instead it turned to the left, crossing bows and running into the stem of the Medina, doing considerable damage. Capt. Martin Cole, of the Medina, is exonerated from any blame. It was he who preferred the charges against Capt. Gray. The action of the inspectors will probably reduce the towing company's fleet to five boats for the next ten days, although another one was expected to be in service the first part of this week.

CLEVELAND.

Mr. C. W. Elphicke, the well known vessel owner of Chicago, was in the city yesterday.

At a meeting of the directors of the Cleveland & Buffalo Transit Co. yesterday, the regular quarterly dividend of 1¼ per cent., payable Aug. 1, was declared.

The Canadian fishing cruiser Petrel seized 59 gill nets last week, containing 1,000 pounds of whitefish. The nets were set by American fishermen in the Canadian waters of Lake Erie.

Capt. Joseph Sweeney, manager of the Independent tug line, has bought the tug Petrel from Munsing parties. Capts. Sweeney and Coulter are bringing the Petrel down from Lake Superior. She will be here in a few days.

Capt. Joseph Sweeney reached port on Wednesday, with the tug Petrel, which he bought at Munsing. She arrived at noon and made several tows during the afternoon. The Petrel will be the strongest competitor the union has against the Great Lakes Towing Co.

Excursions to Put-in-Bay are now being booked ahead by the D. & C. line passenger agent. Among them are the following: The Ohio Baking Co., to Put-in-Bay, Saturday, August 9; the Church of the Good Shepherd, to Put-in-Bay, August 23; the Cleveland Association of Life Underwriters, to the islands, August 29.

The favorite steamer, City of the Straits, will be used for the remainder of the summer to take moonlight excursions out of this port on Wednesday evenings, and the ride will last for three hours. It is expected that the trips will be continued through August and a part of September. The excursions are being handled by George H. Higgs, pas-

senger and ticket agent of the D. & C. Line, while the steamer is chartered by the Georgian Bay Navigation Co.

Members of the Lake Carriers' Association are anxious to have the arrangement made two years ago with the elevator and railroad managers at Buffalo, for handling vessels continued. There has been a split in the elevator interests at that port and to avoid delays to grain carriers later in the season, the matter has been referred to the Buffalo committee.

The steamer Mary C. Elphicke was fined \$500 a week ago, for making a trip after the annual inspection certificate had expired. The fine was remitted, as it developed that the captain of the Elphicke, while in Duluth, made an effort to obtain an inspection, but the officers were busy, and he was ordered to make the down trip and have the boat inspected at this port.

There are times in which the system, if it can be depended on, might prove of considerable value to the vessel owner and to those on board. The questions to be answered before is how far it is applicable to the peculiar conditions of lake navigation, and whether it would cost more or less than the present service by land lines, mail and boat service in the passages.

The steamer North-West, of the Northern Steamship Co., is again running on time. She came in here Saturday and left again on the minute. That is pretty close running for a steamer. For the last trip the steamer has been on the dot, and it seems now that the difficulties caused by the new boilers have been entirely overcome. The North-West, of the same company, is doing quite as well, but will require another trip or two to equal the North-West.

The Cleveland & Buffalo Transit Co. is doing a little business with its railroad connections, as a few advertised excursions indicate. The C., A. & C. will run an excursion to Niagara Falls August 7; the C. & P. Railroad, on August 14; the Fort Wayne, on August 24; and the Wheeling & Lake Erie, on July 30. All of these excursions will be handled through Cleveland, the trip to Buffalo being made on the boat.

Dr. J. W. Pettus, who has been the surgeon in charge of the United States Marine Hospital for three years, will leave for Washington about August 1 to become the Assistant Surgeon General of the United States Marine Hospital Service. The new position is an important one, as Dr. Pettus will become chief of the Bureau for foreign and insular service at Washington. This includes all of the quarantine work in the Philippines, Porto Rico, and the other islands belonging to the United States.

J. C. Gilchrist has bought the steamer Vega from Drake & Maytham, of Buffalo. The price paid is not given out. She was built for the Vega Steamship Co., by the Globe Iron Works Co., nine years ago, and holds an A1 rating, with a valuation for insurance purposes of \$125,000. This purchase probably marks Mr. Gilchrist's advent into the ranks of the owners of steel built vessels. Certainly, he has, hitherto, captured all the wooden bottoms he could lay hands on.

All of the needs of the harbors in this district have been cared for under continuing contracts which have placed in the various funds enough money to last for the coming five years. The only ports not having continuing contracts are Sandusky, where there has been little use for a breakwater project; Fairport, where the engineer is not ready to build a breakwater because he is studying the currents and their effects on bars, and at Huron. All three of these ports have enough money for present requirements.

The strike situation seems to be quiet for the time being. Ashtabula represents the center of interest, as plans are being made for starting tugs there. In Cleveland the fight against the tugmen in the courts has been suspended, awaiting an important decision from Washington on the nature of evidence to be admitted at the investigations. The absence of this decision has impeded the progress of the trials of the tugmen, who are charged with having formed a conspiracy to injure commerce in defiance of the United States statutes, etc.

The following meteorological observations are furnished by the office of the United States Weather Bureau, for the week ending July 23: Prevailing wind direction for the week, south; highest velocity, 38 miles from the southwest on the 17th; mean temperature for the week, 72 degrees; highest temperature, 90 degrees on the 17th; lowest 60 degrees on the 23rd. Sunrise and sunset data computed for local time: July 26 sun rises 4:47, sets, 7:25; July 29th, sun rises 4:49, sets, 7:22; August 1st, sun rises 4:52, sets, 7:19.

At a conference of the tugmen with their attorneys on Wednesday, it was decided to ask that the special police be withdrawn from the tugs of the Great Lakes Towing Co. The complaint will be based on the assertion that the presence of the police is curtailing the privileges of the members of the L. T. P. A. as citizens. The tugmen claim that the police have been too officious along the river, and are too free with the use of their firearms. The tugmen also claim that they are not privileged to stand and talk on the docks without being ordered off by the police. The protest will be a vigorous one when it is made.

CONTINUED ON PAGE 11.

THE COAL TRADE ON LAKE SUPERIOR.*

(From the Black Diamond).

"As I stood on the deck of the steamer Iroquois this afternoon when she entered the harbors of Duluth and Superior, and passed around to the several coal and ore docks, and saw the rapidity with which coal was unloaded from the steamers, and the facility afforded for loading into cars to carry coal and ore East, West and South, and compared it with the facilities afforded in 1871 and 1872, when the trade was first opened by me, I could not help thinking of the emotions that Commodore O. H. Perry, who won the naval battles on Lake Erie September 10, 1813, would have, could he have come back from the other world and been with the American fleet at Manila or Santiago in May and July in 1898 and seen with what rapidity each destroyed the Spanish fleets in those harbors, and compared it with his own facilities eighty-nine years before.

"The comparison of 1871 with 1901 was most marvelous. I doubt if anywhere else in the United States such a contrast can be seen. I propose to give, as well as memory will afford, the particulars of the growth of the trade since 1871, when it was first begun.

"I came to Duluth in March, 1871, and opened a branch of the banking house of E. W. Clark & Co., of Philadelphia. The Lake Superior & Mississippi railroad had been built from St. Paul to the head of Lake Superior, 156 miles. E. W. Clark & Co. were heavily interested in this road. Frank H. Clark, the junior member of the firm, had been elected president in the fall of 1870. The road had been formally opened for traffic August 1, 1870. The object was to carry the wheat grown in Minnesota and Iowa and that to be grown along the line of the Northern Pacific road (then building westward to Puget Sound) to the Atlantic seaboard. It was seen that an empire would be opened by these two roads. All this empire would naturally come to the head of Lake Superior. The L. S. & M. R. R. had a haul of 156 miles in contrast with 410 miles to Chicago. Transportation naturally seeks the shortest route. It was known that competition would be sharp. It was so. During the fall of 1871 wheat sold daily in Minneapolis at the price quoted in Milwaukee. Both roads lost heavily in this competition, but the short haul won. In May, 1871, Jos. J. Albright, representing the Delaware & Hudson Canal Co., one of the five companies in the anthracite coal basins of Pennsylvania, and C. M. Underhill, the general sales agent of these companies at Buffalo, came to Duluth and spent several days there, the result was that about 8,000 tons of coal came up the lakes that season. It was a new adventure. The market was St. Paul and Minneapolis, and the cities and towns south of there. Up to that time wood was the only fuel. The introduction of coal required the entire change of stoves. The facilities for handling the coal were exceedingly primitive. There was no entrance to the inner harbor. The ship canal was not completed. The commerce of Duluth was handled in the 'outer harbor.' A breakwater had been built by the United States extending over 1,200 feet, and inside of that the depot and docks were built and an elevator of a capacity of about 1,000,000 of bushels had been built. And here it may be interesting to say that the first cargo, a small one, of wheat that ever left Duluth in the autumn of 1870, was transferred from the cars to the steamer by wheelbarrows, under the direction of C. G. Eddy, the agent of the road, and consigned to Joseph Raphael, of Philadelphia.

"Coal began to come up the lakes in July and August. It was brought in schooners of 300 to 800 tons capacity. The freight ranged around \$1.50 per ton. To unload these cargoes a tramway was built on the breakwater, and the contract was let to 'Jack' Lewis. The coal was loaded in a basket holding from one to two bushels and hoisted to the tramway by horse power, dumped into wheelbarrows and wheeled to the bins built back of the elevator on ground that I was told by the L. S. & M. R. R. could be had free of rent, and later, when the bins were all filled, the president of the elevator, to the disgust of President Clark and myself, demanded a rent of \$1,000 a year, and finally, after much dispute, got it. The best efforts were made both in St. Paul and Minneapolis to sell it. Parties dealing in fuel bought sparingly. Great interest was awakened, and men from southern Minnesota came to Duluth to consider the question. The freight to St. Paul was \$1.50 per ton. The facilities for handling it were like those in Duluth, exceedingly primitive, consequently the expenses were like a 'tarred stick' that picks up dirt whenever it falls to the ground. With the best efforts that could be made the greater part of these 8,000 tons were carried over until the next year; the bins were covered. In 1872 the ship canal was so far completed that vessels entered the inner harbor. Docks were built by both roads. This afternoon I looked for and finally located the docks assigned by the road, without rental, for this trade. It was the docks now known as the 'N. P. bonded docks.' Meanwhile a syndicate was formed consisting of Hill, Griggs & Co. and Garrett & Johnson, of St. Paul, and myself for handling the trade. I was to receive the coal at Duluth and load it into cars as ordered by these two firms, for the market was wholly in the Twin Cities. The population of Duluth did not exceed 7,000, and wood was abundant and cheap. The method of piling the coal on the dock was improvised—boxes made of plank, 16x2, and filled with coal as the pile grew to a height of 18 or 20 feet, which held the coal in place. Gangs of men were employed and

buckets holding 500 and 600 pounds were made and two teams of horses secured, and as each cargo arrived the vessel was unloaded with dispatch, yet it was like the 'tarred stick' alluded to. As I stood this afternoon on the deck of the Iroquois alongside the Golden Age at the dock of the Northwestern Fuel Co., in Allouez Bay, and saw bucket after bucket holding a ton, each hoisted and run out, discharged and returned in the space of less than two minutes, and compared it with the method 30 years ago, I saw another evidence of the great strides made by human genius in thirty years along all the lines of industrial progress, beginning with naval vessels, railroads and every branch of industry and commerce, and notably so in the last twenty years. The fact was, my thoughts could not find words fit for the occasion. From less than 8,000 tons in 1871, the trade had grown to 3,000,000 in 1901—and no wonder.

"In 1872 E. N. Saunders and others entered the trade. From their entrance has grown the Pioneer Fuel Co., the Northwest Fuel Co., and others. In 1873 my own interest in the coal trade as well as all branches of commerce and industrial pursuits of Duluth, received, in common with the entire country and the world, a blow which for nearly eight years laid us all low. On September 18, 1873, the failure of Jay Cooke & Co. took place, and there began a long funeral procession, speaking metaphorically. I was in the procession, but so far back from the hearse that the grave was not reached until October 9, 1875. The population of Duluth fell to about 2,000. Every branch of business in which I was interested melted away as ice before a genial sun, and in May, 1876, I returned to Pennsylvania. I knew, however, that there was a great future for Duluth. Being asked in Philadelphia in September, 1876, what I thought of its future, I recall the reply, 'That it was a young giant but in swaddling clothes, not yet able to stand alone but with indications of limbs that told of future gigantic growth, and while it then had only 2,000 people, perhaps less, by 1890, it would have not far from 20,000.' Being asked on what I based that prediction, the answer was, 'The empire to the Southwest and West, notably the West, that was growing up along the line of the Northern Pacific railroad.' How well that prediction has been verified let the following census figures of 1870 and 1900 answer: Population of Duluth in 1876, not over 2,000; in 1900, 52,969; of Minnesota, 1870, 549,706; in 1900, 1,751,390; of North Dakota Territory, 1870, 14,181; in 1900, North Dakota, 319,146, and South Dakota 401,570; of Montana, 1870, 43,081; in 1900, 243,329."

*The foregoing speech was delivered by Mr. B. S. Russell, the pioneer coal dealer of Duluth, Minn., but now of Jamestown, N. D., at a banquet of the Lake Erie Bituminous Coal Shippers' Association, at the Spaulding Hotel, Duluth, June 24, 1902, and will be found of much interest as a matter of record.

NEW SHIPBUILDING CONTRACTS.

The American Ship Building Co. has received contracts this week for the construction of two large steel cargo steamers for 1903 delivery, making a total of 25 vessels now in hand and as contracted for.

The first contract signed was placed by G. A. Tomlinson, Duluth, and others, for a steamer 416 feet keel, 50 feet beam, and 28 feet depth of hold, to be ready for service May 1, 1903. The new boat will have triple expansion engines, with cylinders 20, 33½, and 55, by 40 inches stroke of piston, steam will be furnished by two Scotch type boilers 13 feet 2 inches by 11 feet 6 inches. The estimated cost is \$280,000.

The latest contract is placed to the order of the estate of the late Capt. W. S. Mack and others, and is for a steel cargo steamer 374 feet over all, 354 feet keel, 48 feet beam, and 28 feet deep. She will have triple expansion engines and two Scotch boilers. The new boat, which will cost about \$230,000 will be built at the Cleveland yards and will be ready for business next May.

The list of shipbuilding orders now on hand include a large railroad car ferry for the Manistique, Marquette & Northern railway, six cargo steamers for a syndicate headed by Capt. W. W. Brown, six cargo steamers of Canadian canal dimensions for Capt. A. B. Wolvin's St. Lawrence River-Quebec Co., a freighter for H. A. Hawgood, of Cleveland, a package freight boat for the Lake Michigan service of the Anchor Line, a freight and passenger boat for the Lake Superior service of the Anchor Line, two new side-wheel passenger boats for the Detroit & Cleveland Steam Navigation Co., a freighter for C. W. Elphicke, of Chicago, a 6,000-ton steamer for G. A. Tomlinson, of Duluth, and the boat for the Mack estate. Nearly all the berths for early delivery have been taken, but other parties are figuring and the several branch yards of the company will have all the business they can handle during the coming winter.

Since the above was in type contracts for three more steel built cargo steamers have been placed. Mr. Tomlinson, of Duluth, duplicating his previous order, and the Provident Steamship Co., A. B. Wolvin, manager, signing a contract for two more 400 feet steel steamers.

A jawbreaker.—The following occurs in one of the best class papers and a most valued exchange: "At the request of the Secrsdrlduetainetaoinshrdluu." Of course it's machine set in both instances, but how about the intelligence of the compositor?

THE MAGNETIC NEEDLE.

(From the Toledo Times.)

Nearly every month for years a little notice has appeared in the papers of Toledo from the county surveyor as to the variations of the magnetic needle. The Times man had seen it so often that he took it for granted he knew what it was, but confronted with a proposition to explain it he made a pitiful show of his alleged knowledge. It was the same way with a dozen men who were interviewed. They hemmed and hawed, said it was required by law, stuck in something about the north pole, but didn't really confess to know anything about it, and the reporter had to find County Surveyor Webster himself and there glean some interesting facts.

It is a known fact that the magnetic pole is constantly changing. In this section it formerly was four degrees east of north and now it is about two degrees west of north. The surveyor says that is true, but admits that many such things have to be accepted as true without being explained. Relatively the needle in the compass points due north, but as the distance from the pole is increased the needle by reason of various causes varies. The government has established throughout the country various true meridians, which are true north and south lines as the old geographies taught. Toledo has such a line, although probably but few know it, for it is something that must be believed but not seen. In Lincoln and Washington Parks, out near Grand avenue, there are two little stone monuments marking this true meridian.

About 18 years ago Henry W. Wilhelm, who was then county surveyor, had a law passed requiring the surveyor to take measurements once a month as to the deviations of the magnetic needle from the true meridian line and report to the auditor, who is required to publish the same. There were some at the time who thought that perhaps Mr. Wilhelm had the law passed to fatten his purse, but later events proved the value of the law.

So now at least once in a month the surveyor takes his instruments and takes about 12 measurements, six from each monument and then averages them to get the deviation. The last reading showed a deviation of 2 degrees and 18 minutes. For some reason or other it seems to be greater here now than for a long time, as a year ago the needle was only a little over one degree from the true meridian. The surveyor thinks the magnetic pole must be taking some good shifts now and then.

Now this may seem like a lot of red tape, but it is of great value to surveyors who are guided by the deviation in taking measurements, and so they watch for the surveyor's notices very closely. Surveyors also often take out their instruments to test them in order to see if they get the same result as did the surveyor. The county examiners never considered the matter of much importance and have often kicked on the size of the bills, for the surveyor gets two days' time and the papers come in for their share. When the examiners complained the last time as to the amount of money spent, the surveyor asked Mr. Sumner for an option and the prosecutor reported that under the law he must make such reports monthly. The officials have managed to cut down the expense somewhat, but at the expense of the newspapers. If the variation is slight month by month the figures are not published, so perhaps next month the public won't be given a chance to know whether the relation between the magnetic needle and the true meridian is close or not, but to nearly everyone it will be the least of their troubles.

A CANOE CRUISE.

Earl Parsons and James Wallace, young men members of the Chicago naval reserves, reached St. Joseph from Chicago in a 13-foot canoe weighing 35 pounds. They are the first in the memory of the oldest inhabitant to make the run in an open boat. They intend to go to New York in the canoe and to reach it within 60 days after leaving Chicago. The distance is 1,200 miles. This means that they will have to make 20 miles a day. The route they have mapped out is: To the Fawn river; from Fawn river to the Maumee; from the Maumee to Lake Erie; across the lake and down the Erie canal to the Hudson river and on to New York city. If they succeed in reaching New York it will be the longest voyage ever journeyed in an open canoe in the United States.

THE Navy Department announces that the two battleships to be built under the authority of the last naval appropriation bill are to be named the Louisiana and Connecticut, and the two cruisers, the Tennessee and Washington. The battleship to be built at the New York yard will be the Connecticut. The battleships will cost \$4,212,000 and the cruisers \$4,659,000 each. The two tugs authorized by the act are to be built, one at the Mare Island yard and the other at Boston. Admiral Bowles has prepared an elaborate plan for keeping the accounts in connection with the cost of the Connecticut in such order that when she is finished comparison can be made between the respective cost of building ships in government and private yards.

A PRINCIPLE GOVERNING CANADIAN PROSECUTION OF MARINERS.

The "Committee on the Judiciary" of the United States Senate has sustained the position taken in the *MARINE RECORD*, Cleveland, of Jan. 16, 1902, p. 9, under the title "Seamen's Waivers." In that instance it was told how the accused before a naval courtmartial, having objected to the trial as illegal in various ways, and having demanded that it cease, obtained its cessation on what the record entitled the "Twelfth Day" of the trial. It was further shown how a naval trial, to be valid, must consist of unbroken, daily sittings by 5 members (Art. 39, 45, R. S. 1624), since the dispersal of them 48 hours might expose them to undue influences, and make them incompetent judges. (Hickman on Naval Courts Martial, p. 29: "The adjournment of the court over one day could render the sentence void.") If the complete entity prescribed by statute was not given to the accused, or if he was absent therefrom, the judgment not participated in by him was void as to him.

To that the Navy Department, May 29, 1902, in a letter, 4097-02, drafted by Judge-Advocate-General Lemly, describing that trial, replied: "On Thursday, April 18th, 1889, at 8 a. m., the 12th day, the court met and adjourned, in view of the requirement of art. 45, R. S. 1624. The accused was not present on the 12th day, but he had, at his own request and for his own purposes" (the earliness of the hour of this court's meeting, "8 a. m." and the distance the accused had to travel to the place of meeting before breakfast, made it impossible for him to attend without danger to his fragile health) "been excused by the court from attending." Capt. Lemly then said that the test of jurisdiction of courts was whether "injury" was "suffered." That a naval accused should be present at a step in the proceedings against him "enjoined" by statute was, he said, "a point purely technical," notwithstanding the latest Naval Regulations (1900), admitted the necessity thereof; art. 1872, 1880, 1889, 1922, 1923, 1874. He then betrayed the truth and his feeling in the matter by saying that "while" the "point" would "avail" in other prosecutions "it ought not to operate to vitiate the proceedings of" the case in question. The Senate Judiciary Committee, however, with an eye to the protection of American commerce abroad, and with a lively sense that if foreign governments were permitted to represent the accused as absent at his own request, and that nothing was done in his absence by which he "suffered injury," there would be an end to all protection on this score, preferred to accept the Court of Claims' opinion, 36 Ct. Cl. 237: "It is not in the power of the prisoner to waive the right to be personally present," 146 U. S. 372. Chief Justice Cooley states the rule, "If he be absent, either in prison or by escape, there is a want of jurisdiction over the person and the court cannot proceed."

Senate Report, No. 1422, 57th Congress, 1st session, speaking of this trial says: "Your committee received no oral testimony. Its findings are based entirely on the records. Your committee have examined the complete record of that trial and find that the trial and sentence were illegal and void * * * 5. The law requires that naval courts-martial convene on the day named in the precept, and sit from day to day, Sundays excepted; and the court in no case could proceed with the trial in the absence of the accused, with the exception that on exception or objection made the court could be cleared in order that the members might consult as to what they should decide. And though the accused, when the judge-advocate was on the stand as witness for the government, tried to ascertain what the judge-advocate did in court in his absence, the court refused to allow the question. And in that way a part of the trial was in the absence of the accused. And on the 12th day the court, with the judge-advocate, was in session, whilst the accused was not present on that day."

The Department could not and did not deny that the court's refusal to permit interrogates of the judge-advocate by the accused established the fact of prosecution while the accused was absent, and the invalidity of the sentence. (Letter of the Secretary of the Navy 4097-02.)

The interests of commerce and of American citizens abroad have made the United States assure other nations that in prosecutions judgments will not be upheld unless the accused is present during the proceedings in his case, 2 Wharton's International Law (1887) p. 621. This notification and rule the Executive is bound to respect. The ignorant objection is that a statute which has come down from the reign of George II. is "technical." With much more reason might Lemly say that a general courtmartial by Admirals Farragut, Dewey and Sampson was likely to be more just than a trial by 5 other officers who might be mentioned. Yet the former would be void. The question is not the uselessness of an Act of Congress, but whether the Commander of the Navy should set an example of obedience to law. If so, foreign prosecutors cannot cite the existing ruling against American mariners.

G. F. O.

Amount of Reward—Review on Appeal.—The amount awarded by the trial court for salvage services will not be reduced by any appellate court, unless for violation of just principles, or for clear and palpable mistake, or gross overallowance. *Hume vs. J. D. Spreckels & Bros. Co.*, 115 Fed. Rep. (U. S.) 51.

THE COLLINGWOOD SHIP BUILDING CO.

After the launch of the large steel tow barge named the *Agawa*, built by the Collingwood Ship Building Co., to the order of the Clergue syndicate, the keel will be laid for a steel steamer for the Midland Navigation Co. of the following general hull dimensions: 369 feet over all, 352 feet keel, 46 feet beam and 28 feet depth of hold.

The engines will be of the triple expansion type, the cylinders being 20, 33, 54, with a stroke of 42 inches. These will be supplied with steam at a working pressure of 180 pounds per square inch, two Scotch marine boilers, 14 feet in diameter. Work will be commenced on this steamer at once, although much difficulty has been experienced in getting the necessary steel, the American, English and continental markets being so overcrowded with orders that it was found difficult to obtain a supply. Fortunately this company has secured what they will require, not only for this steamer, but for a number of others should they so desire. Although it is not definitely settled, it is said that this steamer will be named the *Midland King*. Her cost will be about \$250,000.

The second steel steamer which the Collingwood Ship Building Co. have contracted to build during the coming fall and winter is for Hagarty & Co., of Toronto. This steamer will also be a bulk freight carrier and will be about 375 feet in length. She will be almost a duplicate of that to be built for the Midland Navigation Co.

Like the other this vessel has to be completed and ready to go into service by June 1st, 1903.

Messrs. Hagarty & Co. are probably the largest ship owners in Toronto. They at present operate the large freighters *Algonquin*, *Rosedale* and *Bannockburn*, *Ar* steamers and at present the largest fleet of large freighters in the Canadian marine.

SUSPENDED ANIMATION.

Superintendent Kimball, of the Life-Saving Service, has received a report from Capt. Ludlam, of the Herford Inlet life-saving station, at Anglesea, N. J., of the remarkable resuscitation of Stanley S. Holmes, a five-year-old boy, after he had been under water 25 minutes. Capt. Ludlam reported that July 5, during a squall in the harbor Wm. B. Holmes and his child were overturned in the water, and that the little son sank, remaining under not less than twenty-five minutes before the life-saving crew of the Herford station were able to secure the apparently dead body. Within four hours after the body was removed from the water the child regained consciousness.

EASTERN FREIGHTS.

Messrs. Funch, Edye & Co., New York, report the condition of the Eastern freight market as follows:

We have nothing further of interest to record respecting the condition of the grain and cotton crops, which are progressing as favorably as can be expected. The freight market shows no sign of any active improvement in any direction, and owners generally are deferring fixing their tonnage as long as possible in hope of some better demand taking place. Some little business has been consummated during the past week in chartering for sugar from Cuba, both to New Orleans and to ports North of Hatteras, principally for prompt tonnage at previous figures. Grain charterers from the Gulf are still inclined to take up further tonnage on the basis of recent fixtures, but do not seem able to increase the rate. One or two charters are reported for cotton from the Atlantic coast for next season, but the majority of charterers are inclined to await further developments before operating. On time basis a few transactions have been recorded, principally for short periods in the West India trade.

Inquiry for sail tonnage shows no improvements, and beyond a few figures in the River Plate lumber trade at unchanged rates, the market remains quiet, barely steady and featureless.

Grain. To London, Liverpool or Glasgow, 3 cents, Hull 4 cents, Bristol or Newcastle 4½ cents, Leith 5 cents.

STATEMENT OF THE VISIBLE SUPPLY OF GRAIN.

As compiled by George F. Stone, Secretary Chicago Board of Trade Saturday, July 19, 1902.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Buffalo.....	430,000	256,000	69,000	22,000	18,000
Chicago.....	2,005,000	4,836,000	8,000	99,000	.....
Detroit.....	254,000	1,000	4,000	2,000	.....
Duluth.....	3,773,000	36,000	.....	13,000	56,000
Fort William, Ont.....	694,000	.....	.....	.....	.....
Milwaukee.....	94,000	.....	26,000	1,000	16,000
Port Arthur, Ont.....	150,000	.....	.....	.....	.....
Toledo.....	266,000	143,000	86,000	10,000	.....
Toronto.....	6,000	2,000	12,000	.....	.....
On Canals.....	648,000	20,000	24,000	.....	19,000
On Lakes.....	481,000	596,000	92,600	6,000	.....
Grand Total.....	20,415,000	6,503,000	718,000	196,000	119,000
Corresponding Date, 1901.....	27,681,000	13,242,000	6,341,000	433,000	341,000
Increase for week.....	607,000	667,000	.....	.....	.....
Decrease " ".....	.....	.....	575,000	62,000	1,000

While the stock of grain at lake ports only is here given, the total shows the figure for the entire country except the Pacific Slope.

SHIPPING AND MARINE JUDICIAL DECISIONS

(COLLATED SPECIALLY FOR THE MARINE RECORD.)

Marine Insurance—Partial Loss—Insurer's Liability.—In case of a partial loss of goods covered by a valued marine policy, the measure of the insurer's liability is the proportion which the loss bears to the sound value at the port of discharge. *Ursula Bright S. S. Co., Limited, vs. Amsinck et al.*, 115 Fed. Rep. (U. S.) 242.

Applicability to Foreign Ships—Washington Statutes.—The statute of Washington (1 Hill's Code, Sec. 1678), which makes every master, consignee, or person having charge of the construction, alteration, repair or equipment, of any vessel an agent of the owner for the purpose of contracting debts on the credit of the vessel, is applicable to foreign vessels obtaining repairs or supplies in ports of the state, as well as the domestic vessels. *The Robert Dollar*, 115 Fed. Rep. (U. S.) 219.

Salvage—Salvage or Towage Service—Towing Leaking Schooner into Port.—Where a schooner had sprung a leak by reason of striking a bar at the mouth of a river while being towed out to sea, which made it necessary to resort to the pumps, and, in the judgment of the master, to put into an intermediate port for repairs, but she was unable to reach such port by sail, owing to head winds, the service of a tug in towing her in was a salvage service, and entitled to be compensated as such. *Hume vs. J. D. Spreckels & Bros. Co.*, 115 Fed. Rep. (U. S.) 51.

Collision—Steamship and Tug with Tow Meeting—Approaching Too Near Before Changing Course.—A steamship and a tug both held in fault for a collision between the ship and barges in tow of the tug, which occurred on the Delaware river in the night, on the ground that, although the two vessels saw each other, when a mile apart, each held its course, and approached head on, until they were so close together that the danger of collision between them was imminent, and in the haste thus made necessary there was a confusion of signals, which brought about the collision. *The John I. Brady*, 115 Fed. Rep. (U. S.) 204.

Steam and Sailing Vessels Meeting in Fog—Unavoidable Accident.—A collision occurred at sea, during a thick fog, between a schooner and a steamship, which met on nearly parallel courses. Each heard the fog signal of the other, and the steamer at once slowed down to a moderate speed and proceeded with caution, while the schooner which was sailing close hauled on the port tack at a speed of about two knots, kept her course and speed; the wind being very light. The vessels were both properly manned and equipped, and had proper lookouts. After they sighted each other, when they were about one hundred yards apart, the steamer did all that was possible to prevent collision. Held, that neither vessel was chargeable with any fault, and that the collision must be attributed to unavoidable accident. *Dunton vs. Allan Line S. S. Co., Limited*, 115 Fed. Rep. (U. S.) 250.

Seamen—Shipping Articles—Validity Under Statutes.—Under Rev. St., Sec. 4511, which requires shipping articles to state "the nature, and so far as practicable the duration of the intended voyage or engagement, and the port or country at which the voyage is to terminate," articles for service on a brig from a port in the state of Washington, "to ports in the District of Alaska, within the Behring Sea and Arctic Ocean, and also other ports and places in any part of the world, as the master may direct, and back to a final port of discharge in the United States, for a term of time not exceeding six calendar months," are not so indefinite in describing the nature of the voyage as to render them void, in view of the character of the vessel, the length of time required to make the voyage to an Alaskan port, and return, and the limit on the term of service. *The Mermaid*, 115 Fed. Rep. (U. S.) 13.

Charter Party—Measure of Damages for Breach.—Under the rule that damages for breach of contract must be confined to those which naturally and directly result from such breach, or may be fairly presumed to have been within the contemplation of the parties when the contract was made, where the owner of a steamer, under a time charter to convey cargoes of bananas from Port Limon to New York, under which a number of voyages had been made, had knowledge of and acquiesced in a custom of the charterer to have a cargo cut and ready to load in anticipation of each arrival of the steamer, and on one outward voyage the vessel was delayed by reason of unseaworthiness, for which such owner was responsible, until on her arrival the cargo was unfit to ship with safety, the charterer is entitled to recover the value at Port Limon of the cargo so lost, and such other loss as directly resulted from the delay; but the charterer was not entitled to load the cargo with knowledge of its condition, and ship the same to New York, and recover as damages the loss by deterioration on the voyage and in addition a sum which it would have earned as freight for the voyage, under a contract with the third party, if the cargo had been delivered in good condition. *The George Dumois*, 115 Fed. Rep. (U. S.) 65.

MARINE RECORD

DEVOTED TO NAVIGATION, COMMERCE, ENGINEERING
AND SCIENCE.
ESTABLISHED 1878.

PUBLISHED EVERY THURSDAY BY
THE MARINE RECORD PUBLISHING CO.
Incorporated.

C. E. RUSKIN.....Manager
CAPT. JOHN SWAINSON.....Editor

CLEVELAND, CHICAGO.
Western Reserve Building. Royal Insurance Building.

SUBSCRIPTION.

One copy, one year, postage paid.....\$2.00
One copy, one year, to foreign countries.....\$3.00
Invariably in advance.

ADVERTISING.

Rates given on application.

All communications should be addressed to the Cleveland
office,

THE MARINE RECORD PUBLISHING CO.
Western Reserve Building, Cleveland, O.

Entered at Cleveland Postoffice as second-class mail matter.

No attention is paid to anonymous communications, but
the wishes of contributors as to the use of their names
will be scrupulously regarded.

CLEVELAND, O., JULY 24, 1902.

JUPITER PLUVIUS has held sway and placed an embargo
on the picnic, excursion and tourist travel.

WHY can't Capt. Cyrus Sinclair capture all licenses?
If he stood in the shoes of Inspector-General Dumont
perhaps he could!

WHAT relation or connection, if any, has the backward
showery summer with the recent geological disturbances
in the West Indies?

LAKE engineers, masters and pilots were on the point
of amalgamating with the federated unions a couple of
seasons ago. The harbor tugboatmen are now there.
So ends the license threatened strike.

So, the ex local inspector who had granted so many
licenses to steamboat officers, found a difficulty in revok-
ing same from Duluth to Buffalo. We all should learn
something about the uselessness of boasting, also about
swelling up on uncalled for occasions.

ANENT the editorial contained in our issue of the 17th
inst. under the caption of "Alien Seamen," we have now
to observe that the immigration inspector at Buffalo has
been cashiered for being too perniciously active and ignor-
antly zealous in the performance of the supposed duties
of his office. The late immigration inspector found it
incumbent upon him during his term of service to board
vessels and ascertain if any Canadians were members of
the crew, and if so, to seek to deport them. He conven-
iently missed all the "Dutch" and "dagoes" not to mention
other nationalities.

THERE has been more tugs placed "in commission" at
lake ports during the past few weeks than ever floated on
fresh water. Tug men seem to have the ear and the pen
of the daily newspaper reporter, and, whether union or syn-
dicate, never a day passes but tugs are being bought and
sold, chartered, refitted, equipped, manned, taken out of
"ordinary" and being placed "in commission." Well! this
tug question has given everyone quite a breeze, even the
United States Attorney General as well as the Secretary of
the Treasury, and of course the junior senator from Ohio,
have had, or are having their attention called to the abhor-
rent existence of a tugboatmen's strike against one firm or
company of owners engaged in harbor towing at lake ports.

RIVER AND HARBOR IMPROVEMENTS.

There is a general impression prevalent, chiefly among
those who are not directly associated with the business of
marine affairs, that the river and harbor appropriation act
as passed by Congress is voted for the upkeep, that is,
the dredging and local improvement as well as the con-
servancy of all navigable waters, including the rivers and
harbors within the boundaries of the states so situated.

The facts, as they really exist, can not be too clearly
presented and understood by such interests. The funds of
the nation, or no part of them, is expended for private, local
municipal or state advantages, the outlay, wherever it takes
place, must be for the general interest and welfare of the
country at large, and be demonstrable of such results pre-
vious to Congress appropriating the people's money for
the several purposes. Localities are improved at the pri-
vate, personal, municipal, or state expense, and, it is only
when such changes are being made as would likely inure
to the disadvantage of commerce that the Secretary of War
is empowered to step in and forbid anything in the nature
of an obstruction to navigation being perpetrated in any
manner.

In view of the foregoing it is not surprising that Lieuten-
ant-Colonel O. H. Ernst, Corps of Engineers, U. S. A.,
should object to a vast outlay of the people's money for
the purely municipal improvements desired in the Chicago
river, and it would be much better for the country if other
officers in that service exhibited a similar honesty of pur-
pose and devotion to duty.

When the water of the Chicago river had been diverted
to the drainage canal running across Illinois to the Missis-
sippi it was found that navigation would be seriously inter-
fered with. Then Chicago asserted itself in a demand that
the national government should assume responsibility for
the river commerce, and should pay for the dredging nec-
essary to maintain a channel deep enough to accommodate
the modern lake steamers.

In his report, which is contained in another column of
the RECORD, Lieutenant-Colonel Ernst says that this work
should not be done by the government, and he has refused
to make an estimate of the cost of maintaining a navigable
channel in the river. He says that the river must be
deepened, and that the tunnels under the river removed, if
vessels drawing more than 16 feet of water are to enter
the channel. He points out that there has been a gradual
decline in the business of the Chicago river for several
years, and says that Chicago cannot hold its own as a lake
port unless it provides a deeper channel in the river.

There should be no discrimination in favor of Chicago
or any other locality, and government officers are remiss in
their duties when making out reports arguing in favor of
government expenditures for private benefits in the dis-
tricts to which they are temporarily assigned, much less
should the heart of a city be invaded, and its sewers cleansed
at the expense of the whole people.

But little can be said at this time relative to the appar-
ent desire to boulevard the entire lake front of cities with
concrete breakwaters, at the same time, the feeling is abroad
that district officers of the Engineer Corps are beginning to
make first class concrete breakwaters for harbors of refuge
where no vessels can anchor, and to formulate elaborate
plans for protection piers, etc., purely in the interests of
and for private commercial industries. This, no doubt,
furnishes a means of sinking some of the nation's super-
fluous millions, it also gives pleasurable occupation, and
teaches, through experience, the best means of cement
mixing, etc., but it also whips Uncle Sam's big family
around the bush in finding the spondoolicks to carry on
such work, nor can it be too clearly set forth, in general
terms, that every cent in the national treasury is collected
from the people, and, therefore, calls for the most careful
possible expenditure.

THE Collectors of Customs at the principal lake ports
are sending out instructions regarding lights to be exhib-
ited at night time by power launches, sail or row boats,
when in navigable waters. The penalty for not comply-
ing with the law is a fine of \$200, and all offenders are to
be strictly prosecuted. It is safe to say, however, that
but few, if any, cases will be brought to the attention of
the Collectors of Customs.

THE MARCONI SYSTEM.

A representative of the Marconi Wireless Telegraphy
Co. has been visiting the principal lake cities for the
purpose of interesting shipping circles in a project look-
ing towards the establishment of the wireless telegraph
system on the lakes.

We gather from the views expressed by some of the
most active vessel interests, that, in so far as cargo carry-
ing boats are concerned, no outlay of money will be con-
sidered in furnishing their craft with the necessary equip-
ment for sending or receiving messages via the atmosphere.

It was not to have been expected that a community
which can find no use for even a simple signaling code of
nearby or distant signals, should go to the expense and
trouble of installing an aerial system of message sending
and reporting for day or night service. The very light
dose of pigeon carrying craze evinced recently on the
ferryboat and excursion lines was simply a fad, though
pretentiously supposed to have a value of some sort to
some people interested in some way in the safety of life
and property.

At present reports are made and orders given at the
ports where the vessels may be, and at Mackinac, the
Sault, the Detroit River or at Port Huron in passing.
The majority of orders given on the way are in the
Detroit River, by letters sent through the United States
river postoffice service, or by telegraph to the ship re-
porter, who delivers the dispatch on board.

Several various forms of night signaling have come
before us, but the one stuck to with the greatest tenacity
seems to be by means of illuminated letters, using the
spelling vocabulary or the international code as indicated
by flag signals. Our advice to the inventors and patent-
ees of these "knowledge distributors," has invariably
been derogatory to their hopes and aspirations. It should
be remembered by those who are wasting time and money
on such like appliances that the lakes are land-locked,
they are already furnished with adequate reporting, life-
saving and telegraph stations, also, that to obtain a com-
mercial success, the extra equipment must be of equal
commercial and technical value, and, needless to say, no
such claims can be laid to the benefits of a wireless tele-
graph installation on the general cargo and passenger
carrying steamers engaged in the interlake trade.

CONTRACTS FOR NEW TONNAGE.

"WITH surprising regularity," is about the way the Amer-
ican Ship Building Co. might announce their contracts for
the construction of new tonnage if interrogated thereon.
At the beginning of the month, twenty steel steamers for
1903 delivery had been contracted for, and up to this writ-
ing, the list has been swelled by eight more, making an
easy \$2,000,000 additional work, or, say an aggregate mon-
etary outlay by the intending owners of next season's new
tonnage, to be received from the hands or yards of the
American Ship Building Co. of about \$7,000,000, with
orders waiting to be closed, and increasing the 60,000 tons
of steel already ordered to be worked up, by the amount
of the later contracts. While the new vessels are chiefly
cargo steamers, ranging from 6,200 to 2,200 tons capacity,
at an estimated cost of from \$290,000 to \$150,000 each,
there is a combined passenger and cargo boat costing \$350,-
000, and a railroad car ferry to cost \$400,000. It is also
of moment to note that the new fleet will be fitted with Scotch
type boilers and artificial draft, except in the case of the
10 steel cargo steamers ordered for the Great Lakes and St.
Lawrence River Transportation Co., A. B. Wolvin, general
manager. Triple-expansion engines of similar diameter
of cylinders and length of stroke is also noticeable, as is
also the uniform hull construction of 50 feet beam and 28
feet molded depth.

DULUTH-SUPERIOR SHIPPING.

In 1890 the tonnage entering and clearing at Duluth and
Superior aggregated 3,000,000 tons, at the end of the calen-
dar year 1901 these St. Louis Bay ports showed a total of
13,000,000 tons, or a steady average mean increase of 1,000,-
000 tons throughout each successive season of navigation.
There has just been sent out from the U. S. Engineer's Of-
fice, Duluth, a diagram showing the vessel freight arriving
and departing for each year for harbors at Duluth and Su-

perior separately, and for the two combined, as compiled under the direction of Capt. D. D. Gaillard, Corps of Engineers, U. S. A. Starting at nearly 1,000,000 tons each in 1890, Duluth gradually led Superior until that port was nearly 3,000,000 tons ahead in 1899, since which time Duluth has slightly, though steadily declined, Superior taking an upward spurt of nearly 1,000,000 tons each year, and is now within about half a million tons of the Duluth descending curve, with the apparent certainty of equaling her competitor's commerce at the close of this season, as the curve shows an almost vertical ascension for Superior to that of a lowering trend for Duluth since 1899. Shorn of all the technicalities and intricacies of statistics, with but three curves shown to marginal figures, the U. S. Engineer's Office at Duluth has given us, in this instance, one of the most valued, simple and expressive diagrams of the consecutive annual commerce at the head of the lakes ever shown, and it is gratifying in this connection to express commendation of the work of Capt. Gaillard and his staff.

SHOULD such charges involving the wholesale suspension, cancellation or revocation of steamboat officers' licenses ever be brought forward again, either on the lakes, coasts, or rivers, the Treasury Department should see to it that a properly competent and qualified court could be convened to permit and adjudicate on the hearing of claims as set forth on both sides of the question. In the present instance the certificates held by over one hundred duly licensed officers at the ports of Chicago, Cleveland, Buffalo and Duluth, were ignorantly, though temporarily, placed in jeopardy at the instigation of a highly influential source, without any recourse at law to be had by the licensed officers on the charges falling to the ground. As we have said, it is now up to the Treasury Department to see that no such a burlesque at law should ever be permitted to obtain in the future, whether inspired and egged on by influence or through ignorance of the laws governing the licensing of merchant marine officers by the Steamboat Inspection Service.

WITH the decision of the local inspectors of steamboats at Buffalo last week, regarding the status of the government licenses held by the striking tugmen, it is sincerely to be hoped that an amicable arrangement will be brought about whereby the business can again be carried on, and with less friction than in the past. Shareholders in the tug company don't want their stock to further depreciate, although it may be but an inconsiderate investment for some of the multi-millionaires. On the other hand, the men who are willing to make earnings for them are no doubt eager to start to work again under more favorable conditions. Furthermore, it has not been amply demonstrated that the government, through the Secretary of the Treasury, can't very well interfere in the matter, or to the extent of cancelling the officers' licenses on account of their refusal to work under the tug company's past terms.

LAUNCH OF THE JAMES H. HOYT.

The steel built cargo steamer James H. Hoyt was successfully launched from the West Superior yards of the American Ship Building Co. on Thursday last.

The general hull dimensions of the Hoyt are 372 feet in length, 50 feet beam and 27 feet molded depth. Tonnage, 3,934 gross and 2,792 net. Her engines are triple expansion and boilers of the Babcock & Wilcox water tube type. The equipment consists of all modern improvements for the rapid handling of ship and cargo.

Among the vessels which will be built at the West Superior shipyards during the coming winter are three exact duplicates of boats turned out at the same yards during the past season.

They are the duplicates of the Sultana, built for G. A. Tomlinson, of Duluth, 356.25 feet in length, and a gross tonnage of 3,914 and a net tonnage of 2,851; the duplicate of the Christopher, built for W. H. Meyers, of Milwaukee, length, 401.25; gross tonnage, 4,260, and net tonnage, 3,137; a duplicate of the G. J. Grammer, built for the Seiter Transportation Co., of Mentor, O., of which Edward England is general manager. The dimensions of the latter vessel are: length, 335.25 feet, gross tonnage, 3,914, net tonnage, 2,850.

In order to facilitate the building of vessels the officials of the company are contemplating placing another steel crane, similar to the one now in use at the yards and it is probable that it will be ready for use before the close of navigation.

While leaving Buffalo harbor Tuesday night, the passenger steamer Pennsylvania collided with the steamer Andaste, bound in, and disabled her wheel.

NEW BOATS FOR THE D. & C. LINE.

The first of the new boats for the D. & C. Line will be finished and ready for service at the opening of navigation next season. She will be considerably larger than the Eastern or Western States, and will have space to carry 900 tons of cargo and sleeping capacity to accommodate 1,000 persons. The carrying capacity will be about 3,500 passengers.

The new boat will be a four decker and in the arrangement of the decks is where the latest addition to the fleet of the D. & C. Line will differ materially from any of the other boats. On the main deck the entire space forward of the social hall and engine room will be devoted to cargo, the second-class cabin, such as those on the new Buffalo boats, will be in the after part of the ship, and will be divided from the ladies' second cabin, for the accommodation of passengers not holding stateroom tickets.

On the next deck there will be three rows of staterooms, one outside and two inside, instead of, as on the other boats, one inside and one outside. The balcony arrangement will be the same. The crew will be quartered on the upper deck, where, on the new Buffalo boats, the musicians are now located. The crew's quarters will occupy the entire upper deck, their rooms extending from the pilot house back along the entire length of the cabin.

For the accommodation of the passengers there will be over 300 staterooms, where in the Eastern States and Western States there are but 212, including the parlors.

General Manager McMillan figures that with the new boat on the Cleveland route next year and another ready for the following year, that should anything happen to the Buffalo boats one of the new steamers could immediately take its place, while the City of Cleveland and the City of Detroit, now on the Cleveland run, could take care of the route until such time as the regular boats would be able to go back.

The new Cleveland boats will have as much power as the Buffalo boats, and their length will make them the longest boats on fresh water.

INTERNATIONAL LONGSHOREMEN'S CONVENTION.

Before the adjournment of its eleventh annual convention at this port, the International Longshoremen's Association became, by vote of the 200 delegates present, the International Longshoremen, Marine and Transport Workers' Association. Daniel J. Keefe of Chicago, and Henry C. Barter, of Detroit, were re-elected unanimously to the positions of the president and treasurer, respectively. As the head members of the association's executive committee, they will be assisted by 9 vice presidents, as follows: John Walsh, Cleveland; John J. Joyce, Buffalo; J. Gordon O'Neill, Duluth; J. A. Madsen, Portland, Or.; Cornelius Wild, Buffalo; J. A. Gwin, Galveston; Frank Morrell, Ashtabula; James McLaughlin, Windsor, Ont.; J. E. Porter, New Orleans. A long stride in the direction of enrolling every worker engaged in operating vessels on the Great Lakes was taken on Monday by the executive board of the International Longshoremen, Marine and Transport Workers' Association, when action was taken to admit every local branch of the Licensed Tugmen's Protective Association to membership. This will give the Longshoremen's Association control over the handling of freight carried in lake vessels, and also over the workmen engaged in piloting them in and out of port. What effect the new alliance will have on the strike now being conducted by the licensed tugmen against the Great Lakes Towing Co. at almost every port on the lakes, is not yet known. The licensed tugmen's organization has over 2,500 members, divided among twenty-eight unions on the chain of lakes. The convention voted to ask for a joint conference of the freight handlers of the Great Lakes and the managers of the freight lines, to be held in February, to decide upon a wage scale for next year. The convention also declared against allowing crews of boats and non-union workmen to trim ore and grain cargoes, and voted to compel all wooden boats loading ore at ports where longshoremen are organized to employ union men, and to fine all refusing this, 3½ cents a ton at unloading ports. Seven districts were created, over each of which a vice president shall have control.

THE MERCANTILE MARINE.

According to the statistics compiled by Lloyd's Register, the shipping of the world at the present time consists of 17,156 steamers, with a tonnage of 25,859,987, and 12,472 sailing vessels having an aggregate tonnage of 6,577,776. Of the total of 29,628 vessels, 11,041 are owned in the United Kingdom and its colonies, while all the other sea powers own 18,587 vessels. The tonnage of the British owned ships totals 15,546,897, and that of the foreign-owned ships, 16,890,866.

PRESIDENT Charles M. Schwab, of the United States Steel Corporation, is authority for the statement that nearly 650,000 tons of steel rails have been ordered for delivery in 1903. This surpasses the steel rail output of any previous year in any country. The Pennsylvania R. R. alone has put in orders for over 200,000 tons of steel rails, a large proportion of which will be produced by companies controlled by Pennsylvania R. R. interests.

CLEVELAND.

CONTINUED FROM PAGE 7.

With the whole matter in his hands for a settlement it is likely that Mr. Keefe, president of the International Longshoremen's Marine and Transit Workers' Association will visit Cleveland for a conference with officials of the Great Lakes Towing Co. Upon the result of this meeting will largely depend the future of the tugmen's strike against that company, and it now appears as if any action taken will come within the limits of being classed as a national conspiracy to hinder commerce, unless, indeed, the dog in the manger act of preventing tugboats from being worked can be charged against the owners and managers of the tug line.

The government engineer has received word that the plans for the improvement of Fairport harbor have been approved, and the bids advertised for. The appropriation this year covers the dredging for the river and harbor and the repair of the east and west piers, both of which have been much in need of improvement. The appropriation for this work will amount to \$200,000. No work will be done there on the breakwater this year. The engineers want to study the winds and the currents to find if possible the cause of the semi-annual formation of a bar across the river. If this can be found then breakwater may be so built as to prevent it in the future.

Arrangements have been made by the Pennsylvania railroad for the dredging of the river in front of its docks which front on the river below the Lake Shore bridge. This action came as a result of the grounding there lately of a number of boats. It seems that the slit had collected along the docks, forming a great bank of mud. The boats, plowing into that, would throw it out into the main channel of the river, which is maintained by the government, and in some places the result has been the formation of a bar which the government had to clear away. The Pennsylvania will begin its dredging soon.

It is to be expected that with a fleet of boats numbering over the century mark that the Pittsburg Steamship Co., (United States Steel Corporation) would always have one or more vessels ashore, in drydock or undergoing repairs throughout the season of navigation. This record has been fully maintained and up to the present only one of the fleet has been a total loss, the whaleback model Thos. Wilson, sunk through collision off Duluth. The latest casualty to the fleet was the Thomson, which ran ashore at Point Au Barques, on a foul bottom, and is reported as badly damaged. Taken as a whole, the fleet is being handled very successfully, and with not more than the ordinary number of strandings, etc.

PORT HURON.

Mr. Cronk, who purchased the business of the Kendall Marine Co. last week, has sold out to Fred Meno and others, who will give the business their attention.

The Great Lakes Towing Co. have the tug Colton, Capt. John Sinclair, and tug Martin, Capt. Al Colton, working at this port, and both are doing some business.

The Lynn Bros., Marine Reporting Co., have moved their office over Boynton & Thompson's office, and are in next to the Great Lakes tug office, where they will look after vessel reporting, chartering and selling vessels.

H. B. Buckridge is rebuilding his warehouse that was destroyed by fire two weeks ago, and when finished will be one of the finest warehouses on the lakes. During the same fire the Lynn Bros. Marine reporting office was also destroyed, but they are now located over Thompson & Boynton's office.

The steamer Capt. Thos. Wilson, built by the Jenks Ship Building Co., of Port Huron, seems to be showing the lake steamers a thing or two about speed, the beating the Wilson gave the steamer Andrew Carnegie on Lake Superior, is the talk of the lakes, among marine men. The Jenks Co. are to be congratulated on turning out such a fine ship as the Wilson, this ship's machinery is all fitted with the Phoenix metal, and the test that it went through during the race with the Carnegie was wonderful, as there was not a warm journal on her.

Messrs. Daly & Hanon, Ogdensburg, N. Y., a firm doing dredging work, etc., at Lake Ontario ports, visited Cleveland this week, looking after business, and, incidentally to learn all particulars regarding the mooted dredging combine, and, if possible, to enter upon one or more of the government contracts, soon to be awarded under the appropriations for the class of work made by the last Congress in the river and harbor bill. Competition is thought to be advisable in most instances, and should Messrs. Daly & Hanon secure any Lake Erie contracts, it will naturally follow that Lake Erie contractors will invade Lake Ontario ports and strive to knock out the local competitors, if only as a lesson to teach them how to remain in their own waters, and not to seek work on another lake or lake Erie in particular.



A TRUSCOTT BOAT

SIMPLE, SAFE,
RELIABLE, SPEEDY.

It may be possible to build better and safer boats, but it hasn't been done yet.

We send a completely illustrated catalogue and price list free, which tells you all about boats and

WHY TRUSCOTT
BOATS EXCEL.

Truscott Boat Mfg. Co.,
ST. JOSEPH, MICH.

A SKETCH OF THE PIONEER AMERICAN VARNISH BUSINESS.

Prior to 1827 all the varnish that had been offered for sale in this country had been imported, although it had been the custom for carriage painters and repairers to make small quantities in their shops for their own use. Pascal B. Smith, who had learned the needs of the carriage painter and also acquired some experience in varnish making while working in a carriage paint shop, conceived the idea, in that year, that a business could be built up by manufacturing varnish for the use of carriage makers, cabinet makers and other manufacturing concerns using varnish in their business. Putting his ideas to a practical test, he erected a shed in an old apple orchard near what is now the corner of Second Avenue and Sixth Street, in New York City, and this small shed was the first varnish factory in America. At first he manufactured in a very crude way, and only in small quantities. After making a few gallons of what he called "carriage varnish," and a small quantity of "furniture varnish," and allowing it to settle for a few days, he would fill as large a can as he could conveniently carry, and taking a small measure with him, would set out to peddle his product to the different carriage painters and other varnish users.

From the very beginning this venture of Mr. Smith proved a success, and his business increased so rapidly that in 1829 he called to his assistance Mr. James L. Stratton, a practical house painter, and his brother, Samuel P. Smith, who gave up his business of master mason, in Albany, to become a partner in the new firm of P. B. Smith & Co., varnish makers. In due time, the venture was reported to the National Government, which then, as now, took a keen interest in the industries of the country. At the present time, all candidates for the Civil Service are taught that varnish, as an American product, was first made and sold in 1828.

Very soon after its organization, the new firm erected a factory at Astoria, on land belonging to Mr. Stratton, establishing their office at 127 Maiden Lane. The business increased so rapidly that some jealousy was created over its management, which resulted in 1832 in the withdrawal of Mr. Samuel P. Smith, who went to Newark, N. J., and there established a varnish factory of his own. At this time Mr. P. B. Smith's half brother, Nathan Smith, was admitted to the firm in place of Samuel.

About the year 1842, Mr. Edward Smith, another half brother of the founder of the business, was the traveling clerk of the house, making yearly trips to the south and west. He started from New York by way of Philadelphia, going from there by stage over the Allegheny Mountains down the Ohio and Mississippi rivers as far as New Orleans, stopping at the principal towns on his way, and then back again as far as St. Louis by boat. From this point, he would cross the country by stage to Chicago, Detroit, Cleveland, and Buffalo, returning home through New York state; a long and arduous journey, with many hardships that the traveler of the present day cannot even imagine. At that time, all goods for Cincinnati, Louisville, Pittsburg and St. Louis, were shipped by sailing vessel to New Orleans, and were then forwarded by river steamboats to their destination. Goods for Buffalo, Cleveland, Detroit, Chicago and the other lake towns, were shipped by way of the Erie canal to Buffalo, and thence by sailing vessel across the lakes. Interior towns were either reached by canal, or where this means of communication was unavailable, were transported by teams over the ordinary roads. The large sales were made in the spring and fall, and the firm's customers usually paid occasional visits to their office. Shortly after this, Mr. Edward Smith was taken into the firm.

In 1844 the prosperity of the business had grown to such an extent that Mr. Pascal B. Smith, retired from the firm, having accumulated what, in those days, was considered an immense fortune. Edward Smith was admitted as an equal partner, and the firm name became Edward Smith

& Co. This name continued until 1850, when on the death of Nathan Smith, it was changed to Smith & Stratton. At this time the office was moved to 141 Maiden Lane, where it continued until the death of Mr. Stratton in 1859.

In 1856, the factory was moved from Astoria, the firm having purchased from Union College six lots on Fourth and Fifth streets, Hunter's Point, where they erected the first buildings used for manufacturing purposes in that neighborhood. The deed of the property contained a protective clause against molestation on account of harmless odors, etc. Upon completion of the factory buildings at Hunter's Point, several two and three story apartment houses were erected on Fifth street for the employees. In one of these, Mr. Richard Armstrong, for many years chief varnish maker, was born.

The year 1856 was also marked by the entrance of Mr. J. A. Elmendorf, into the employ of Smith & Stratton. He continued his connection with this firm and its successors until his death in 1900, at which time he was vice president of the present corporation.

In 1867 Mr. Elmendorf was made a partner by Mr. Smith and the firm name was again changed to Edward Smith & Co., which still continues as the style of the business. In November 1878, Mr. Edward Smith died, and his son-in-law, Mr. Chester Huntington, took his place in the firm, the partners being Mr. Elmendorf and Mr. Huntington. In 1800 Mr. Alexander Maitland became a member of the firm, and in 1889, the business was incorporated under the same name, the officers being: President, Alexander Maitland; vice president, John A. Elmendorf; treasurer, Chester Huntington; secretary, A. M. Bates, and superintendent, S. V. V. Huntington.

In 1892 Mr. Chester Huntington retired as an officer of the corporation, and S. V. V. Huntington was elected in his stead, since which time, he has filled the position of treasurer and manager.

In the earlier days of varnish making, Zanzibar, Benguela, Angola, and Pebble Gums were used almost exclusively. Afterward, Manilla Gum came into the market for the cheaper varnishes until the extensive importation of Kauri Gum, which was the first used in varnish making, by Smith & Stratton. The first lot came to this country direct from New Zealand about 1846. A ship had gone to New Zealand on a trading venture and after the captain had disposed of his cargo he found the vessel without ballast to sail back. On looking for something to load his ship with, he found a great quantity of this Kauri Gum piled up in one of the towns and made up his mind that it could be used for some purpose and at once bargained for it. He loaded his ship with it and sailed for home. On his arrival he could find no purchaser. He, therefore, hired a barn near New Bedford, Mass., and filled it with the gum. Some two or three years after, an Irish-Englishman by the name of John Boyd took hold of the lot and came to Smith & Stratton with samples. After testing the gum they purchased the first hundred thousand pounds for 2½ cents per pound. The gum became in immediate demand and the whole was disposed of at continually advancing prices. Smith & Stratton purchased the last ten thousand pounds of the cargo at 35 cents per pound. In 1853, after Kauri gum became a regular article of importation into this country the price began to fall again until it reached 5½ cents in 1860.

The original kettle which Mr. Pascal B. Smith used for boiling his varnish when he first began business in the shed under the apple trees, is still preserved in the office of Edward Smith & Co.

The Gazette, Montreal, has to say that: In 1898 the United States Government paid \$660,000 for the transport Grant. Since that year a large amount has been spent annually in repairs on the ship. Lately it was discovered that new boilers were required and instead of going to the expense of installing them it was decided to sell the ship. She brought \$51,000, one twelfth of what was paid for her four years ago.

Pintsch Gas Lighted Buoys.

Adopted by the English, German, French, Russian, Italian and United States Light-House Departments for channel and harbor lighting. Over 1,000 gas buoys and gas beacons in service.

Burn Continuously

from 80 to 365 days and nights
without attention, and can be seen
a distance of six miles.

Controlled by

THE SAFETY CAR HEATING AND LIGHTING CO.

160 Broadway, New York City.

NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND
RIVERS—MICHIGAN.

TREASURY DEPARTMENT,
OFFICE OF THE LIGHT-HOUSE BOARD,
WASHINGTON, D. C., July 17, 1902.

GROSSE POINT LIGHT-VESSEL STATION.—Notice is hereby given that, on or about August 9, 1902, this station, on the southeasterly side of the upper end of Lake St. Clair Twenty-Foot Channel, will be permanently marked by Light Vessel No. 75, showing a fixed white lens-lantern light, and the gas-lighted buoy now marking the station will then be withdrawn.

Light-Vessel No. 75 is a scow-shaped vessel, having one mast with a black, circular, cagework day-mark at the masthead, a red hull with "Grosse Point" in black on each side, and "No. 75," in black on the stern.

During thick or foggy weather a bell, struck by hand, will be sounded from the vessel.

PORTAGE RIVER RANGE FRONT LIGHT No. 1.—Notice is hereby given that, on or about July 25, 1902, this light, on the easterly bank of Portage river, about half way between Edgertons Dock and Messners Dock, will be moved to a pile cluster, in about 14 feet of water, on the channel bank of the river, at a point about 900 feet in front of the rear light, and re-established, as heretofore, on the present range line.

In addition to marking the present range line with Light No. 2, the light will also mark the turning point in the channel for vessels going up the river.

By order of the Light-House Board:
GEORGE C. REMEY,
Rear-Admiral, U. S. Navy, Chairman.

LATEST MARINE PATENTS.

704,685.—Sailing boat. Thomas Jensen, Arendal, Norway.

704,729.—Device for retaining the speed of vessels. Aaron Zerbe, Philadelphia, Pa.

704,878.—Ship's berth. Addison W. Hitt, San Francisco, Cal., assignor of one-half to Charles E. Naylor, San Francisco, Cal.

704,905.—Apparatus for repairing vessels at sea. Neil J. McLaughlin, Boston, Mass.

IMPROVEMENTS AT TOLEDO.

The Pennsylvania, which controls the Manufacturers Railway, of Toledo, is preparing to receive bids for a mile of dockage to be built along the west side of the river below the Wheeling bridge. The contemplated improvement will cost, it is estimated, between \$750,000 and \$1,000,000 for the docks alone. The contract will call for a fill of 2,000,000 feet, which, with the machinery necessary to operate the docks, will nearly double the sum mentioned. This is the largest contract which has ever been figured on at Toledo, and one of the largest on the Great Lakes. The Manufacturers' Railway docks will have a most advantageous location, as vessels going to these docks will not be delayed by bridges and can be handled with very little assistance from tugs. The docks will be located between the Wheeling bridge and Bayview Park, and are only the beginning of more extensive improvements. By means of these docks the Pennsylvania will have an opportunity to enter more extensively into the lake iron, coal, and ore traffic. The Pennsylvania has been somewhat handicapped in this regard, and at present handles only all rail coal through Toledo, as it has no docks at this port.

To make the improvement the Pennsylvania must erect modern coal and ore handling devices on the new docks, and in accordance with the policy of the company, these machines will be the equal of any on the Great Lakes. The equipment of the new docks, it is said, will be a revelation in modern ore and coal handling machinery.

SUN'S AMPLITUDES.

The following approximate amplitudes of the sun's rising or setting will be given each week in this column during the season of navigation. A second bearing may be taken by compass at sunset, by reversing the east bearing given for the nearest latitude, as the change in declination for a few hours makes but a slight difference in the true bearing of the sun's setting. The bearing may be taken when the sun's center is on the horizon, rising or setting. The elements which may be obtained by taking these amplitudes are the quantities known as local attraction, variation and deviation, or the total difference between compass and true, or geographical bearings.

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.
Date. Amplitude. Bearing P'ts. Bearing Comp.
July 25.....E. 27° N. = N. 5½ E. = E. N. E. ¾ N.
July 31.....E. 25° N. = N. 5¼ E. = E. N. E. ¼ N.

LAKE ONTARIO, S. END HURON AND CENTRAL PORTION LAKE MICHIGAN, LAT. 44° N.
Date. Amplitude. Bearing P'ts. Bearing Comp.
July 25.....E. 28° N. = N. 5½ E. = E. N. E. ½ N.
July 31.....E. 26° N. = N. 5½ E. = E. N. E. ¼ E.

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.
Date. Amplitude. Bearing P'ts. Bearing Comp.
July 25.....E. 29° N. = N. 5½ E. = E. N. E. ¾ N.
July 31.....E. 27° N. = N. 5½ E. = E. N. E. ¾ N.

LAKE SUPERIOR, LAT. 48° N.
Date. Amplitude. Bearing P'ts. Bearing Comp.
July 25.....E. 30° N. = N. 5¼ E. = E. N. E. ¾ N.
July 31.....E. 28° N. = N. 5½ E. = E. N. E. ½ N.

With a compass correct magnetic, the difference between the observed and true bearing or amplitude will be the variation for the locality. Should there be any deviation on the course the vessel is heading at the time of taking the bearing, the difference between the observed and the true amplitude after the variation is applied will be the amount of deviation on that course. If the correct magnetic bearing is to the right of the compass bearing, the deviation is easterly. If to the left, the deviation is westerly.

NEW FRENCH SHIP-SUBSIDY BILL.

The new French ship-subsidy bill, which was recently passed by the Chamber of Deputies, was declared a law of France in a presidential decree dated April 7, 1902. The most important changes in the bill, as given in the consular report, were:

The life of the law was reduced from fifteen years to ten years, and the term during which vessels shall enjoy the benefits of the new act was fixed at twelve years.

The quinquennial periods set forth in Article III. were reduced to four years.

The age of foreign or French built vessels sailing under the French flag entitled to the shipping or navigation bounties, was made twelve years instead of fifteen years.

There is no diminution in the shipping bounty (compensation d'armament) above 7,000 tons. In other words, vessels measuring more than this tonnage received the same bounty as those of 7,000 tons gross register.

The minimum navigation bounty granted to steamers was fixed at 1.50 francs (28.95 cents), instead of 75 centimes (14.475 cents). Steamers over 7,000 tons receive the same bounty as those measuring 7,000 tons. For sailing vessels, the navigation bounty is decreased after 600 tons, instead of 800 tons, and up to 1,000 tons. After 1,000 tons, the bounty remains the same as for sailing vessels measuring 1,000 tons.

The 5 per cent. deduction from the shipping and navigation bounties is retained for the benefit of all French-registered seamen instead of for the crews of the particular vessels receiving the bounties.

The two bounties are reduced 5 per cent. for steamers which on their trial trips do not make 12 knots per hour, half loaded; and are reduced to 10 per cent. for steamers which do not make 11 knots in their trial trips when half loaded.

The date when sailing ships, in order to enjoy the benefits of the old law of 1893, could be contracted for was extended from March 1, 1902, to May 1, 1902, provided that a declaration had been made at the custom-house before February 1, 1902, and that the vessels receive their French register before January 30, 1903.

The total tonnage of vessels contracted for after January 1, 1902, which can take advantage of the above provision, is fixed at 45,000 gross tons. The maximum amount which can be paid out of the treasury for the shipping and navigation bounties granted under the provisions of the present law, shall not exceed 150,000,000 francs (\$28,950,000), of

which the maximum amount for sailing vessels shall not exceed 15,000,000 francs (\$2,895,000).

The maximum amount for construction bounties shall not exceed 50,000,000 francs (\$9,650,000) for the 300,000 tons of steamers and 100,000 tons of sailing vessels provided for in the present law. Each year, the construction bounty can not be paid for more than 50,000 tons of steamers and 15,000 tons of sailing vessels, not including the vessels under construction before March 13, 1902. If the maximum of 50,000 tons should not be reached in any year, the difference will be carried over from year to year.

ANTARTIC AND SOUTH AMERICA COAL FIELDS

Additional argument in support of "New Theory promulgated, i. e. 'That the coal forming era covered the entire earth prior to erosion.'"

Mr. Haskold says, of Terra del Fuego, lignite exists in large quantities of a superior kind with 48 per cent. of carbon. It is believed that it might be utilized and a coal station formed in some sheltered inlet, for passing steamers.

An extensive coal field is reported in the territory of Neuquen, and samples gave these results: Carbon 50 to 54 per cent., coke, 57 to 61; calorific power, 4,570 to 4,636. This is supposed to be a continuation of the San Rafael coal field.

Dr. Francesco Moreno referring to these far southern coals says: "It was equal to the best coal found in France or England, I was not long in finding the bed which is about 8,250 feet over the sea level. There are a dozen veins. After much trouble in clearing away the snow, I examined other beds at an elevation of 10,560 feet, where I found coal veins 13 feet thick.

According to analysis this coal closely resembles the coals of Coventry or Marles.

Prof. Kyle has obtained from the ash of coals from Mendoza as high as 32 per cent. of vanadium, a chemical of high value in Europe. I submit the following proposition; South Africa as a coal field has a great future, two things as prime factors, development and transportation facilities being necessary to attract capital for investment, owing to the almost in sight, completion of one or more isthmian canals, should arouse a keen interest in the coals of Venezuela and United States of Columbia. Their proximity, and being easily accessible, is of much significance.

Conner, Pa., July 17, 1902.

J. R. HECKMAN.

FAST TRAVEL BY RAIL.

The Twentieth Century Limited train of the Lake Shore & Michigan Southern Ry. on Saturday, July 12, made a remarkable record for fast running. The train when 45 miles west of Buffalo was 2 hours and 28 minutes behind its schedule, and then an attempt was made to make up as much time as possible. The train covered the 134 miles between Brockton and Cleveland in 131 minutes. From Cleveland to Toledo at some points a speed reaching ninety miles an hour was made, covering the distance of 113 miles in 103 minutes. The run to Elkhart, Ind., 133 miles, was covered in 115 minutes. The run into Chicago from Elkhart was slower, on account of slowing down while passing through three towns where the speed of trains is limited by ordinance. Slow-downs were also necessary for the fourteen grade railroad crossings in Chicago. Despite these delays, the 101 miles were covered in 111 minutes, and the train, which was due in the city at 9:45 a. m., arrived at the Grand Central Passenger Station only 28 minutes late. The time for 481 miles was 460 minutes. The Baltimore & Ohio Southwestern Railroad established a new record on its line for fast running on July 14 by making the run from Washington, Ind., to Cone, Ill., 165 miles, in 164 minutes, and making two stops aggregating 16 minutes, the actual running time being 146 minutes.

Carrying Goods on Deck—Insuring Partial Liability—Amount of Recovery.—Where the owners of a steamship insured a part only of their liability for carrying goods on deck under a valued policy reciting that the goods were valued at the sum for which the insurance was effected, which was less than the actual value, on a total loss the insurers were liable for the amount of the policy, which was in the nature of liquidated damages, and were not entitled to any reduction by reason of the fact that the ship-owners settled their liability for less than the value of the goods. *Ursula Bright S. S. Co., Limited vs. Amsinck et al.*, 115 Fed. Rep. (U. S.) 242.

NOTES.

THE Bermuda floating dock, which left Sheerness, England, recently, is expected to arrive at Bermuda at the end of July. It has cost more than £200,000, is 545 feet in length, and is capable of lifting vessels of seventeen thousand tons displacement, the lifting capacity of our dock at Algiers, La., being 20,000 tons.

THE U. S. torpedo boat destroyer Whipple, built by the Maryland Steel Co., Sparrow's Point, Md., covered the mile course at a speed of 29.44 knots, and the highest attained was at the rate of 30¼ knots. She maintained during the hour's trial required by the endurance test the speed of 27½ knots, 1¼ knots more than required by the contract. The conditions were that the boat must make a single mile at a speed not below 28 knots an hour, and must be run one hour without stopping at a speed of 26 knots.

The Quebec bridge is being constructed over the rowest portion of the River St. Lawrence between Montreal and Quebec, about 6½ miles west of the commercial center of the latter city. The river at this point flows between high rocky cliffs on both sides, the waterway being about 1,900 feet at low tide, and about 2,500 feet at extreme high tide, the tidal rise varying from a minimum of about 14 feet to a maximum of 20 feet. The maximum depth of water in the channel is about 180 feet, the tidal current being 6 to 7 knots an hour. The depth of water decreases rapidly towards the main river piers, where, at extreme low tide, it is 10 feet deep, the maximum depth at high tide being 30 feet. These piers are 1,800 feet apart between centers.

ACCORDING to Lloyd's Register for 1902, 25 steam yachts of a total tonnage of 8,323 and 36 sailing yachts of a total tonnage of 1974 were built in the United Kingdom last year. This record refers to yachts of ten tons and upward. The register has a record of 1,124 steam yachts built in the United Kingdom and colonies of 156,005 tonnage and 3,615 sailing yachts of 70,384 tonnage, and of yachts built in other countries, 262 steam yachts of 29,438 tonnage and 1,590 sailing yachts of 20,842 tonnage. There are owned in the United Kingdom and British colonies 923 steam yachts of 102,619 tonnage and 3,390 sailing yachts of 62,765 tonnage, and in other countries 463 steam yachts of 82,824 tonnage and 1815 sailing yachts of 28,462 tonnage.

THE Bureau of Statistics has just received its first record, under the new law, of shipments to Alaska. Formerly no statistical record was made of the shipments to and from Alaska, which was a customs district of the United States, and treated as such in the commercial reports of the custom houses. During the last session of Congress, however, a law was enacted applying to trade between the United States and its noncontiguous territory, the provisions of the law relating to the collection of statistics of foreign commerce, and this will enable a complete record of the movements of merchandise between the United States and its noncontiguous territory. It is in compliance with this law that the first record of the shipments to Alaska is now in the hands of the Bureau of Statistics. The shipments from Seattle alone during the month of June amounted to \$774,000. Among the more important articles shipped from the United States to Alaska were cattle, horses, flour, oats, railway cars, coal, eggs, gunpowder, hay, builders' hardware, machinery, fresh beef, milk, refined sugar, and vegetables.



MARVELOUS
THE NEW
BAUSCH & LOMB-ZEISS
STEREO Binocular Glasses.
Used by the Armies and
Navies of the World.
Invaluable for Tourists,
Sportsmen and Every-day
Use. Booklet Free.
Bausch & Lomb Optical Co.,
New York. Rochester, N. Y. Chicago.
For sale by all dealers.



THE
Bliss LIQUID (Spirit)
COMPASS

Made in seven sizes by JOHN BLISS & CO., 128 Front Street, New York, is finely finished sensitive, accurate and durable. Moves quickly and is extremely steady. Is the best Liquid Compass ever made in this or any country. For sale by ship chandlers generally.

PICKANDS, MATHER & Co.

PIG IRON.
IRON ORE AND COAL.

FUEL LIGHTERS

AT BUFFALO,
ERIE,
ASHTABULA,
AND CLEVELAND

At DETOUR, MICH., A FUEL DOCK equipped with
Shute capacity of 600 Tons.
Best Quality PITTSBURGH COAL furnished at any
time during Day or Night.

WESTERN RESERVE BUILDING, CLEVELAND, O.



Steamboat Fuel at Chicago.
YOUGHIOGHENY and
LEHIGH COAL CO.

J. T. CONNERY, Manager. ARCHIE J. HITCHCOCK, Dock Supt.
MAIN OFFICE: 1238-1242 Chicago Stock Exchange Building.
Long Distance Telephone, Main 5049. 110 LA SALLE STREET.

FUEL DOCKS: No. 1, Michigan Slip and Basin. 'Phone 3046, Main.
FUEL LIGHTER: No. 2, N. Halstead St. Bridge. 'Phone 773, North.
Equipped with 125 2-ton Buckets for Fueling anywhere in Harbor

WE PRODUCE OUR YOUGHIOGHENY COAL
AND GUARANTEE QUALITY.

IN PRACTICAL USE ON THE BEST AND LARGEST LAKE STEAMERS

Using all Types of Boilers and all Pressures of Steam.

Every Purifier Warranted to Remove all Sediment or Scale-Forming Substance.

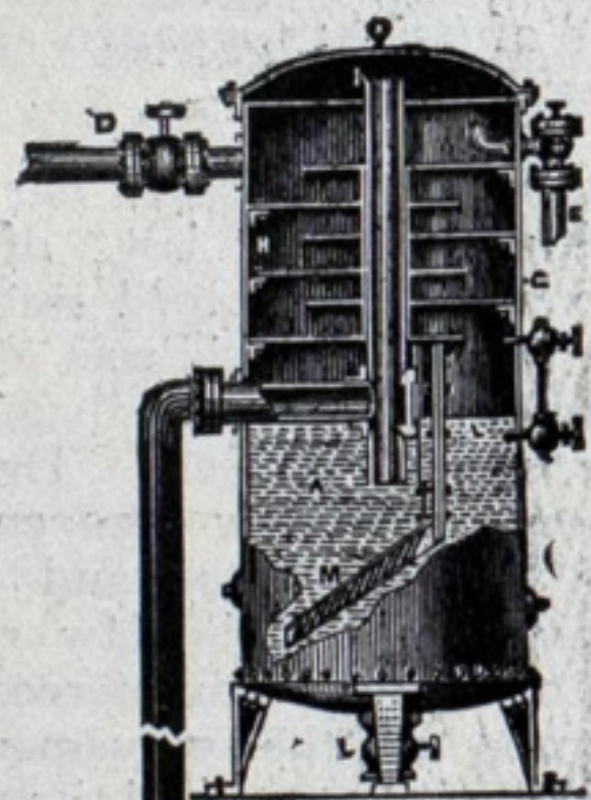
ROBERT LEARMONTH,

PATENTEE,

SEND FOR CIRCULAR.

100 WHITE BLDG., BUFFALO, N. Y.

THE BUFFALO
FEED WATER
HEATER
AND PURIFIER.



**NAMES OF STEAMERS ON THE LAKES
USING THE BUFFALO FEED WATER
HEATER AND PURIFIER:**

Zenith Transit Co.'s steamers Empire City,
Crescent City, Zenith City, Superior City,
Queen City, Pennsylvania and John W. Gates.
The Republic Iron Co.'s steamers America,
Brazil, Thomas Maytham and Chili.
Mitchell Transportation Co.'s steamer
Hendrick S. Holden.

Minnesota Iron Co.'s steamer Presque Isle.
American Steel Barge Co.'s steamer Alex.
McDougall.

Lake Michigan & Lake Superior Trans-
portation Co.'s steamer Manitou.

Bessemer Steamship Co.'s steamers S. F.
B. Morse and Douglas Houghton.

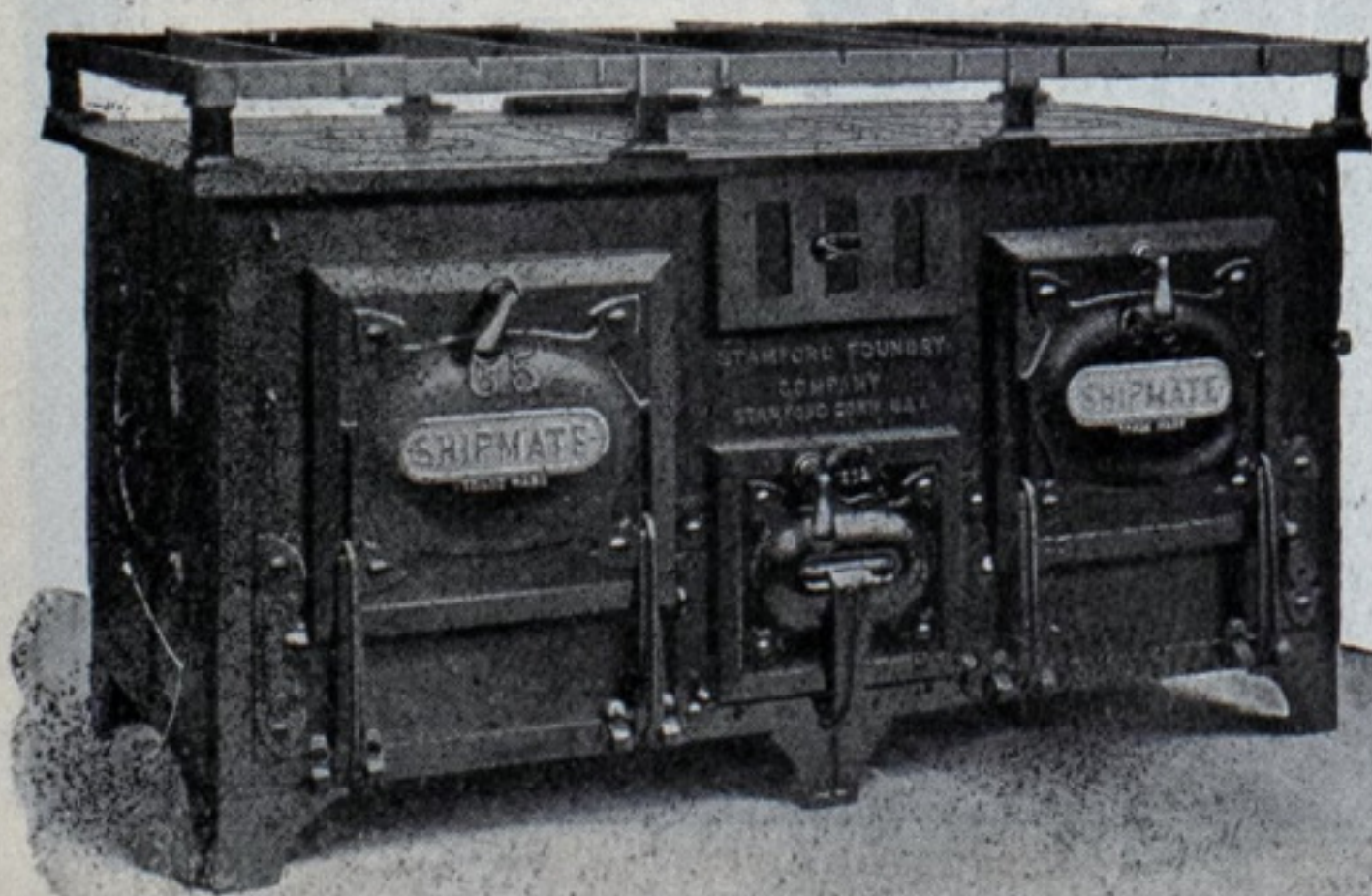
American Transportation Co.'s steamers
John Harper and Alex. Nimick.

Red Star Line's steamers Robert Mills and
Wyoming.

Wilson Transit Line's steamers W. D. Rees
and Andrew Carnegie.

And the steamer William R. Linn.

SHIPMATE RANGES.



Seven sizes, eleven
styles, ranging from
No. 65 (five-foot
range,) for large ves-
sels, down to No. 2, a
small two-hole range,
for the smallest vessels.

It is more than 21
years since we com-
menced making Ship-
mate ranges.

Let us send you, free,
a catalogue and a small

pamphlet giving the names of hundreds of vessels having our
ranges.

THE STAMFORD FOUNDRY COMPANY,
STAMFORD, CONN.

Established 1830.

M. A. HANNA & Co.

COAL, IRON ORE AND PIG IRON.

Steamboat Fuel at Ashtabula.

Large Supplies of Best Quality.

Fuel scow with elevators and discharging
spouts. Storage of 650 tons. Discharges
150 tons an hour into steamers while
unloading cargo.

LIGHTER

carrying different grades
at all times.

MINERS AND SHIPPERS.

MAIN OFFICE, Perry-Payne Bldg., Cleveland, O.

THE W. L. SCOTT COMPANY

ERIE, PA.

WHOLESALE DEALERS IN

Shamokin-Wilkesbarre ANTHRACITE
Youghiogheny, Mansfield, PITTSBURG

COALS

VESSEL FUELING
A SPECIALTY

by steam lighter or car dump
at all hours. Electric Light.

MAIN OFFICE:

Scott Block. Long Distance 'Phone 440.

FUELING OFFICE:

Canal Dock, Long Distance 'Phone 320.

D. VIANCOURT & SON



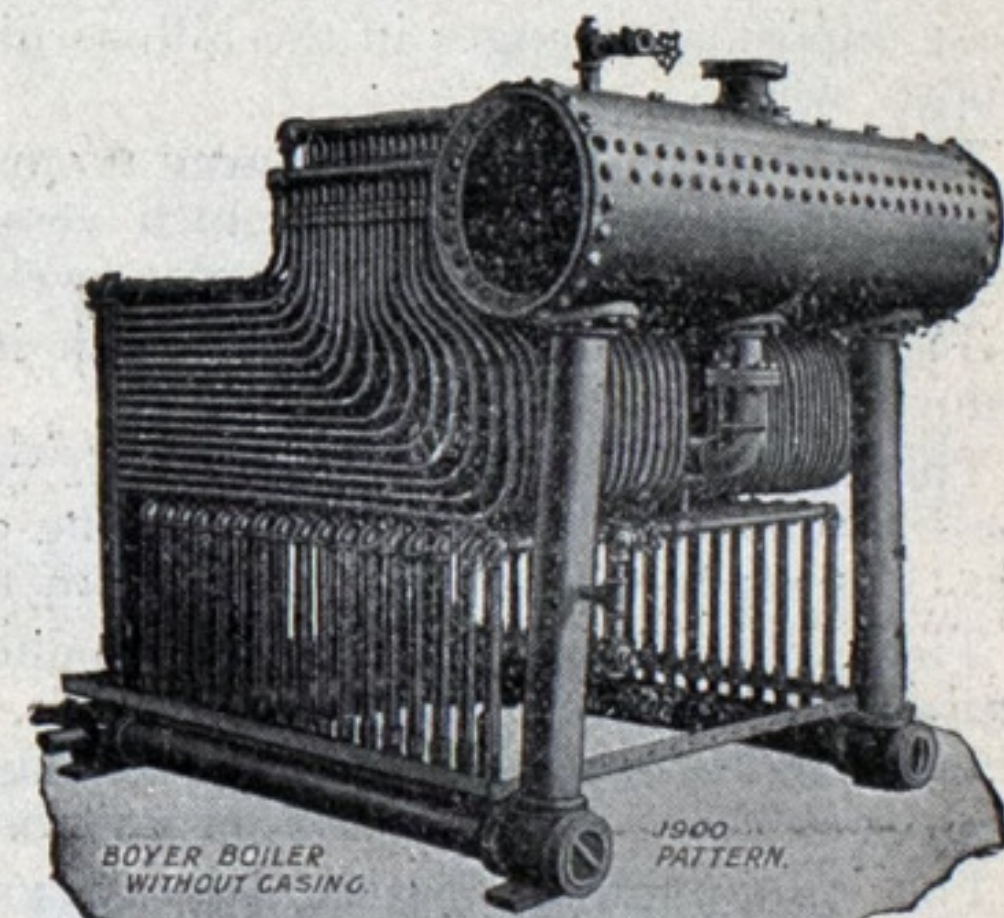
**Tin, Sheet Iron and
Copper Works.**

Repairing Stoves, Furnaces, Etc.
Boat Work a Specialty.

211 PEARL ST.
'PHONE A 1095.

CLEVELAND, O.

JOHN E. THROPP & SONS CO.,
TRENTON, N. J., U. S. A.



BUILDERS OF
SINGLE, COMPOUND AND TRIPLE EXPANSION
ENGINES.
CONDENSERS.
BOYER SECTIONAL WATER TUBE
BOILERS.
PROPELLER WHEELS.
MACHINERY COMPLETE FOR PLEASURE
YACHTS, TUG BOATS AND LIGHT DRAUGHT
PASSENGER BOATS.

A LITTLE GOOD KAURI GUM

In refined linseed oil makes
an excellent medium for
grinding ZINC WHITE in-
tended for use on metal.

ZINC WHITE

Is essential for durable paint
in white or tints, and a small
percentage of good gum in
the oil adds to its working
qualities and enhances its
beauty.

FREE—Our practical Pamphlets,
"Paints in Architecture."
"The Paint Question,"
"French Government Decrees."

THE NEW JERSEY ZINC CO.,

11 Broadway, NEW YORK.

\$41.00 to Los Angeles and San
Francisco.

Seattle, Portland, Tacoma, etc., via Big 4
Route. Get tickets at Collver's 116 Eu-
clid Ave.

Compasses Adjusted

For deviation, and deviation
tables supplied. Great facilities
for doing the work by day or
night.

John Maurice.

CHICAGO.

Office, 33 Millwaukee Ave.
Residence, 1330 West 20th St.

'Phone, Canal 539.

A QUESTIONABLE ADMIRAL.

Rear Admiral Crowninshield, U. S. N., reports that a court of inquiry has found nobody to blame for the casualty to the U. S. battleship Illinois, which ran on rocks in the perfectly chartered harbor of Christiania, Norway. All the same, Crowninshield was in command and responsible for the ship, which will now have to go to an English dockyard for repairs.

Closely following upon Secretary Moody's trenchant criticisms of the policy of placing in command of large and important vessels men whose knowledge of matters nautical is confined to an office desk, the accident to the U. S. S. Illinois has caused much unfavorable comment upon the seamanship of certain officers of the navy in general and of Admiral Crowninshield in particular. There are those who do not hesitate to say openly that whatever knowledge Admiral Crowninshield may possess, he is incompetent as a navigator, and these point to the former court of inquiry to which he was subjected when in command of the Maine in 1897, when only the personal influence of his friends saved him from severe censure.

In investigating the conditions on Admiral Crowninshield's ship at that time, they found that there was no oil on board and that the engines were being racked to pieces. They also found the crew almost on the verge of mutiny, owing to the dictatorial manners of the commander, and a diligent search revealed absolute ignorance and incompetency on the part of Admiral Crowninshield.

FLOTSAM, JETSAM AND LAGAN.

On the twenty-third of last month the torch was applied to the hull of the old receiving ship Vermont, at Fastport, Me., and one of the most brilliant blazes ever seen in that vicinity, was witnessed during that night and most of the following day. The old frigate had been partly stripped by her new owners for the metal in sight, but much of the copper fastenings and other bolts could only be gotten at after her destruction by fire. The copper and other metals in the burned ship will be sent to Boston by schooner.

Rev. Samuel Hahn recently took leave of his little flock in a New Jersey town with the following words: "Brothers and sisters, I have come to say good-bye. I don't think God loves this church, because none of you ever die. I don't think you love each other, because none of you marry. I don't think you love me, because you haven't paid my

salary. Your donations are moldy fruit and wormy apples, and by their fruits ye shall know them.' Brothers, I am going to a better place. I have been called to be Chaplain of a penitentiary. I go to prepare a place for you, that where I am there ye may be also. May the Lord have mercy on your souls. Good-bye."

The recent discussion of the respective functions of civil and professional authorities in the American forces has brought forward an amusing story of the Secretary of the Navy in Hayes' administration. Soon after his appointment he was visiting a battleship for the first time, and happened to hear eight bells struck. "What are they doing?" he asked. "They are striking eight bells, sir," was the reply. "What bad management that is, to have eight bells!" commented the cabinet official. "I will make it my business to see that hereafter each man-o'-war is fitted out with one bell that can be struck eight times."—Ex.

Government Proposals.

U. S. ENGINEER OFFICE, Buffalo, N. Y., July 23, 1902. Sealed proposals for hire of dredging plant for excavation in Niagara River and Tonawanda Harbor will be received here until 11 A. M., August 22, 1902, and then opened. Information on application. T. W. Symons, Major, Corps of Engineers. 30-34

FOR SALE.

Passenger Steamer, completely refitted this spring; length 109 ft.; beam 18 ft.; draft 6 ft. Boilers built by Riter Bros.; engine by Trout. Both repaired and in good condition. Allowed 205 passengers. Fore and after cabin 16x20. Apply to C. S. Cadwallader, 200 Main St., Buffalo, N. Y. 29-33

THE CHASE MACHINE COMPANY,
ENGINEERS AND MACHINISTS.

MANUFACTURERS, UNDER THE CHASE PATENTS, OF
Fog Whistle Machines, Hoisting Engines, Steering Engines Automatic Towing Engines,
Power and Drop Hammers, and other Machinery. Engineers' Supplies and General Jobbing.
111 ELM STREET. TELEPHONE, MAIN 994. CLEVELAND, O.

JOHN DONNELLY, SR., PRES.
JOHN DONNELLY, JR., VICE PRES.

H. B. FOLGER, TREAS.
THOS. DONNELLY, SEC'Y

THE DONNELLY SALVAGE
AND WRECKING CO., Ltd.

KINGSTON, ONT.

EXPERIENCED DIVERS, TUGS, STEAM PUMPS, ETC.,
SUPPLIED ON SHORTEST NOTICE.

A. J. MORSE & SON.
DIVING APPARATUS
140 CONGRESS ST. BOSTON.

ORAM FIX. ESTABLISHED 1860. J. W. FIX.
S. FIX'S SONS,
Successors to S. FIX & SON,
Steam Flue Welding Works
Our Work Stands Government Test.
Our Welds are Perfectly Smooth.
Write us for Prices.
COR. LEONARD AND WINTER STS. Cleveland, O.

Become an Officer
Our Special Training for Seamen in Ocean Navigation, Lake and Coast Navigation, and Marine Engineering has been endorsed by the best nautical experts in the country.

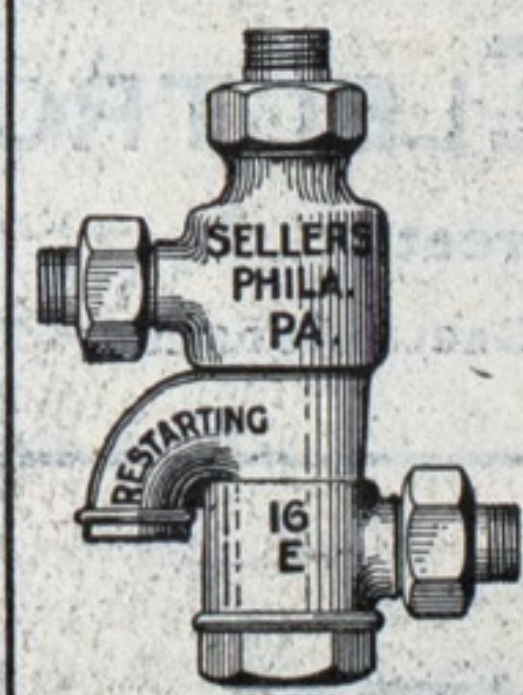
DON'T be satisfied with a low-grade license or an ordinary seaman's berth. No matter in what capacity you are engaged, whether on lake, river, or deep-sea craft, we can train you to pass any examination for license that may stand between you and a position of increased pay and responsibility. Mark X, in the coupon, before the position you want, cut out the coupon, and send it to us with your name, address, and occupation. By return mail, we will explain our plan.

INTERNATIONAL CORRESPONDENCE SCHOOLS
Box 901, SCRANTON, PA.

Please explain how I can qualify for the position marked X below.

Master	Architectural Draftsman
First Officer	Mechanical Draftsman
Second Officer	Bookkeeper
Petty Officer	Stenographer
Chief Engineer	Chemist
1st Assistant Engineer	Civil Engineer
2d Assistant Engineer	Mechanical Engineer
Lake Captain	Machinist
2d Class Pilot	To Speak French
Electrician	To Speak Spanish
Refrigeration Engineer	To Speak German

Sellers' Restarting Injector



A strictly first class machine at moderate cost.
Perfectly automatic, has wide range of capacities, and raises water promptly with hot or cold pipes.
Very simple, has few parts and is easily repaired.

All parts interchangeable, made of the best bronze, and the workmanship is perfect. Send for special catalogue descriptive of this Injector.

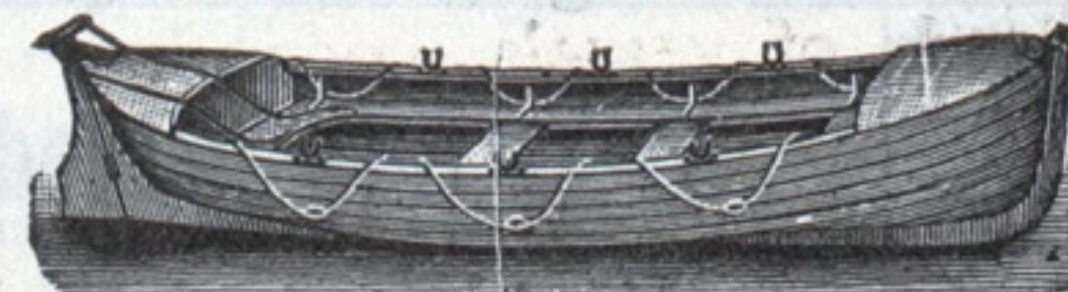
JENKINS BROTHERS, Selling Agents
NEW YORK, BOSTON, PHILA., CHICAGO

NEVERSINK CORK JACKET AND LIFE BELT.

Warranted 24 lb. Buoyancy and full Weight of Cork, as required by U. S. Inspectors. Consolidated Cork Life Preservers. Superior to all others. Rings Buoys and Penders. SAFEST CHEAPEST. Approved and adopted by U. S. Board of Supervising Inspectors. Also adopted by the principal Ocean, Lake and River Steamer Lines as the only Reliable Life Preserver. Vessels and trade supplied. Send for Catalogue. Awarded four medals by World's Columbian Exposition.



METALLIC
and
WOODEN
LIFE
BOATS.



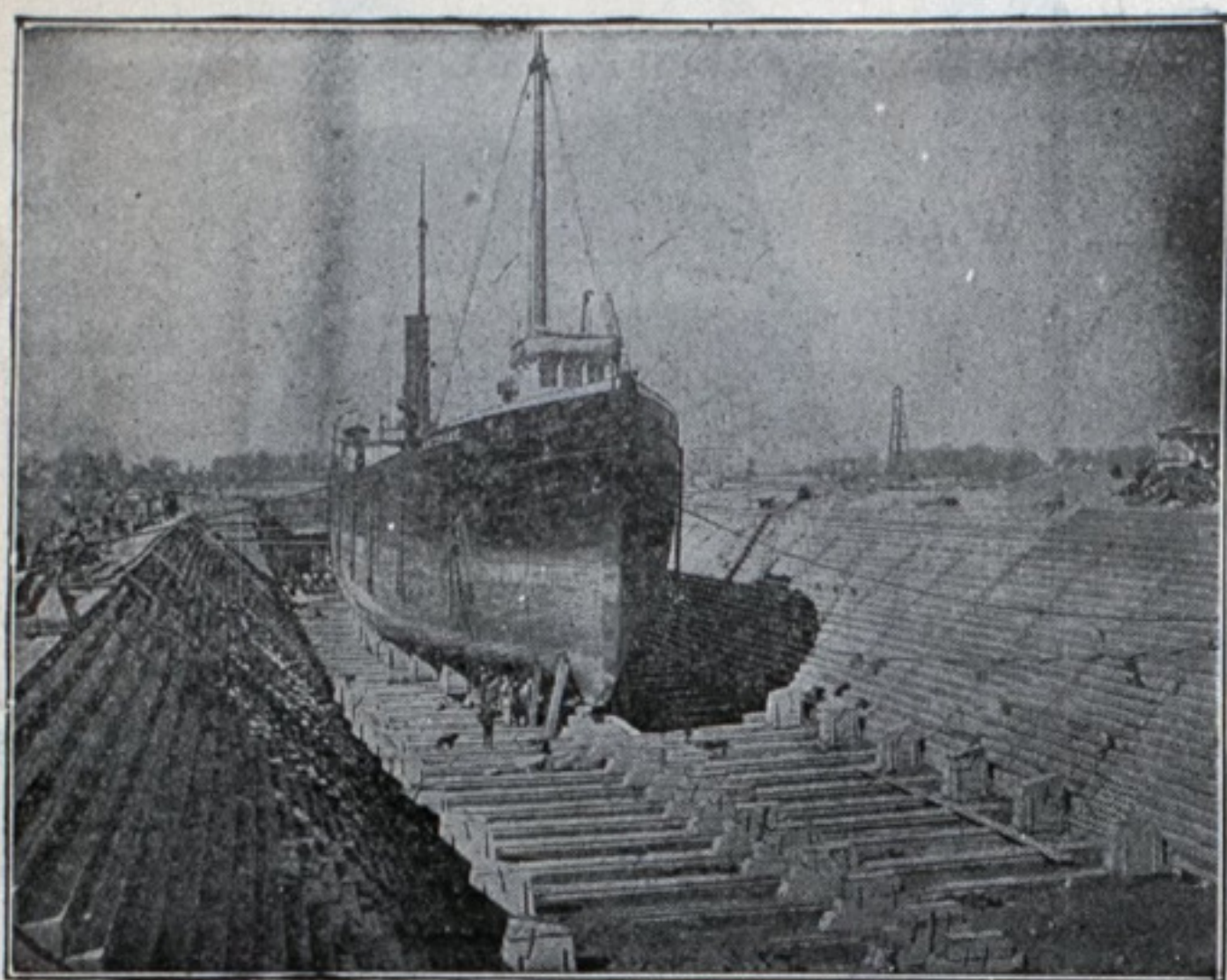
Metallic Life Rafts, Marine Drags.

Manufacturer of Woolsey's Patent Life Buoy, which is the lightest, cheapest and most compact Life Raft known. Send for illustrated catalogue. Get our prices before buying elsewhere.

D. KAHNWEILER'S SONS 437 Pearl St. New York City

The Construction and Maintenance of Vessels Built of Steel,
BY
THOMAS WALTON.

A Comprehensive and Accurate Consideration of Modern Shipbuilding.
Illustrated, \$7.50 Net.
J. B. LIPPINCOTT CO. Philadelphia



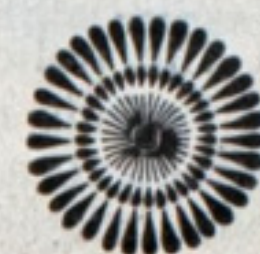
Craig Ship Building Co.

TOLEDO, OHIO

New Dry-Dock 450 feet long, 110 feet wide
on top, 55 feet wide on bottom, 16 feet
water on sill.

Repairs to Metal and Wooden Ships
a Specialty.

Metal
and **Wooden**
Ship Builders.



THOS. MACBETH, President.
C. W. KELLY, M. E., Vice President.

L. S. DICKEY, Manager.
C. J. SNOW, Sec'y and Treas.

JOHN G. MESKER, Supt. of Machine Shop.

THE MACBETH IRON CO.

Machinists - Pattern Makers.

IRON, BRASS AND STEEL CASTINGS, AETNA GRATE BARS

REPAIR WORK A SPECIALTY.

57 West Center Street,

CLEVELAND, OHIO.

BURTON & KENNEDY,

ENGINEERS AND MACHINISTS,

Manufacturers of the BURTON STEAM PUMP and Reducing Valve
Blacksmithing, Steamfitting and Repair Work given Prompt Attention.

PUMPS AND MARINE WORK A SPECIALTY.

Cor. Main and Center Streets, Phone Cuy. C. 500.

CLEVELAND, O.

TELEPHONE WEST 244.

RESIDENCE, 183 LAWN ST.

LAKE ERIE BOILER WORKS,

J. J. KEENEN & SONS, PROPRIETORS.

BOILERS, TANKS and SHEET IRON WORK, COAL and ORE BUCKETS
REPAIRING A SPECIALTY

Also Flues Taken Out, Pieced and Reset, New Flues always in stock.

COR. ELM AND HEMLOCK STS

CLEVELAND, O.

ELECTRICAL MACHINERY.

High-Class Electrical Appliances

DESIGNED ESPECIALLY FOR MARINE WORK.

CORRESPONDENCE SOLICITED.

THE ELECTRO-DYNAMIC CO.

212-226 Ionic Street,

PHILADELPHIA, PA., U. S. A.

CABLE ADDRESS: EDCO, A B C CODE.

Telephone West 702 G.

WM. SWEENEY,

PRACTICAL

Ship Carpenter
and Caulker,

Office and Yard, Whiskey Island,
Near Willow Street Bridge,

CLEVELAND, - - - OHIO.

T. LONG, GEN'L. MGR.

D. J. MURPHY, SUPT.

LONG & MURPHY BOILER CO.

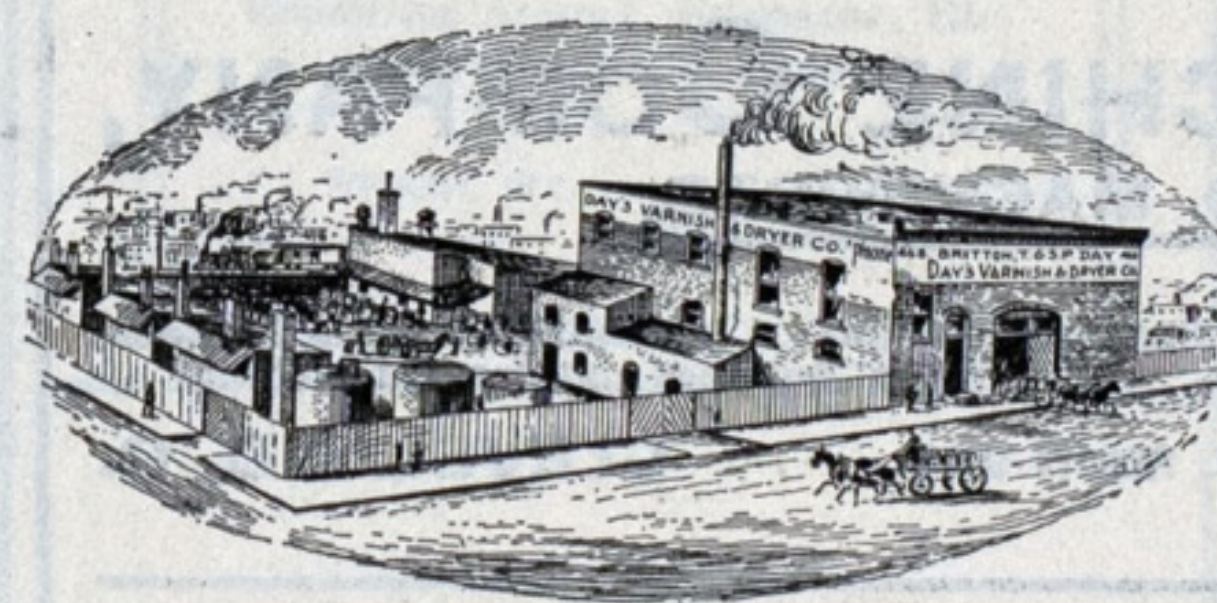
MANUFACTURERS OF
MARINE BOILERS, COAL, ORE AND CLAMSHELL BUCKETS,
REPAIR WORK A SPECIALTY.

'PHONES: MAIN 786.
A. 2265.

120-126 ELM ST.

NIGHT PHONE RIDGE 277 X.
CLEVELAND, OHIO.

WHEELER ELASTIC BLACK PAINT



PHONES: CUY. A 25.
CUY. A 23.

Wears Well. Guaranteed not to crack
or blister. Will not evaporate after
once set. Is not affected by acids. Is
a fine water-proofing Material.

BOILERS, SMOKE STACKS,
STEAM PIPES, etc., can be painted
either hot or cold.

MANUFACTURED ONLY BY

DAY'S VARNISH AND DRYER CO.
CLEVELAND, O.

Edwards Marine Air Pump.

FOR LICENSE TO MANUFACTURE THESE WELL-
KNOWN MARINE AIR PUMPS APPLY TO

WHEELER CONDENSER & ENGINEERING CO.

120 LIBERTY ST., NEW YORK.

SEND FOR PAMPHLET.

W. S. JENKS, President.

O. L. JENKS, Vice Pres. and Treas.

A. M. CARPENTER, Sec. and Gen'l Mgr.

The Jenks Ship Building Co.

Office and Machine Shops
Fourth Street.

Yards
Foot of Lincoln Ave.



Steel and Wood Ship Builders.
Marine Engines and Boilers.



Port Huron, Mich.

— STEAM WINDLASSES CAPSTANS AND STEERING APPARATUS —